REPORT RESUMES

ED 015 005 PS 000 021

CODING MANUAL FOR APPROACH (A PROCEDURE FOR PATTERNING RESPONSES OF ADULTS AND CHILDREN).

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EDRS PRICE MF-$0.50 HC-$4.80 118P.

DESCRIPTORS- *BEHAVIOR, *CODIFICATION, *DATA PROCESSING, *DATA ANALYSIS, ENVIRONMENTAL INFLUENCES, ECOLOGY, PSYCHOLOGY, SOCIAL RELATIONS, BEHAVIOR PATTERNS, *BEHAVIORAL SCIENCE RESEARCH, RECORDS (FORMS), REACTIVE BEHAVIOR, APPROACH,

DESCRIBED AND EXEMPLIFIED IS A CODING SYSTEM FOR TRANSLATING ON-GOING BEHAVIOR OF CHILDREN AND ADULTS INTO A NUMERICAL LANGUAGE, THUS PERMITTING THE DATA TO BE SUMMARIZED AND ANALYZED BY COMPUTER. APPROACH IS BASED ON OBSERVATION. THE OBSERVER, WHO BECOMES PART OF THE ENVIRONMENT, REPORTS INTO A TAPE RECORDER THE RESPONSES OF THE MAIN FIGURE BEING OBSERVED. THE REPORT MUST CONTAIN FOUR COMPONENTS WHICH ARE THE SUBJECT (WHO OR WHAT DOES THE ACT), THE PREDICATE (WHAT IS DONE), THE OBJECT (TOWARD WHOM OR WHAT THE ACT IS DIRECTED), AND ANY NECESSARY SUPPLEMENTARY INFORMATION (QUALIFIERS OF THE ACTION). THESE COMPONENTS ARE TRANSLATED ACCORDING TO THE CODING SYSTEM INTO THE NUMERICAL LANGUAGE. A CHART SUMMARIZES THE MAJOR APPROACH BEHAVIOR CATEGORIES AND NUMBERS ASSIGNED TO THEM. (EF)

ED015005

Coding Manual for APPROACH

(A Procedure for Patterning Responses of Adults and CHildren)

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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This work was supported by Grant No. D-156(R) from the Children's Bureau, Welfare Administration, and Grant No. MH-07649, National Institutes of Health, Department of Health, Education, and Welfare. This is a pre-publication copy, not for quotation.

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CODING MANUAL FOR APPROACH

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Acknowledgements

This coding system has had a long and difficult birth process, and many people have contributed to its development. An early colleague to whom appreciation must be expressed is Miss Barbara Seelye, who almost a decade ago worked with the senior author to construct such a system for the analysis of environmental factors influencing language development in mentally retarded children. In the current version Mrs. Alice Honig has been involved from the beginning and has made invaluable contributions. It was she who painstakingly observed children and adults in various settings and then meticulously scanned the observational records in an attempt to classify empirically the recorded sigments of behavior. She has also been influential in developing and refining the codes and in training observers to collect the behavior samples. Mrs. Ruth Wynn joined the group relatively late but has more than compensated for her late start by intensity and quality of effort. Mr. Barry Kaplan first suggested the usefulness of the grammatical metaphor in conceptualizing the behavior units, a suggestion which profoundly influenced the final system which emerged. To Professor Stanley Sapone of the University of Rochester and some of his perceptive students go thanks for shaking some of the smug assumptions being made in earlier versions of the system and thus to keeping the level of inference down to a manageable level. Many members of the Children's Center staff (especially Miss Norma Graham, Mrs. Ann Paullin, Mr. Roy Shore, and Dr. Edmund Sullivan) have, over the months, made many valuable suggestions which have been so assimilated as to convince us that they are our very own. And finally a word of appreciation from the senior author to a very patient "Approach Team" for delays caused by her occasional unavailability and her exercise of a Project Director's veto power at times when only she felt any dissatisfaction with the system at its current level of evolution. Surely all the participants in the development process hope that the result is a system for analyzing behavior records which will be of considerable value to workers in many areas of the behavioral sciences.

The Behavior Record

The coding system to be described here is a numerical language, intended to be spoken and understood by computers, into which on-going behavior can be translated and then summarized and analyzed. The system itself does not require any particular type of behavior record or sampling procedure. It is as applicable to time as to event sampling procedures. Nor does it require any specific type of social situation, although it was developed within a nursery school setting. It can describe a person alone or in a group; it handles adult behavior almost as well as it does child behavior, although for certain types of adult behavior new verbs would need to be introduced. Although it can deal with a person functioning in a group and relate what any or all of the group members did, it is nonetheless individually oriented. That is, it describes events from the frame of reference of one particular person (called the central figure). It should be possible to code live behavior into this language, but none of the authors has ever become skillful enough to do this. Such coding does not appear to be an unattainable goal, however.

What is Behavior?

This point will not be debated here, but it is appropriate to say a word about the type of behavior which is recorded and coded. The language was developed to describe the array of behaviors likely to occur in normal social interaction, and the codes developed are taken from the language of everyday behavior. This means that the verbs of the language are molar rather than molecular verbs--handles objects rather than contracts muscles; looks at people rather than focuses eyes, etc. To be sure, the verbs of the language vary along a molar-molecular dimension; in general, however, they are molar and purposive. Although observers are trained to make as few inferences as possible, the coding language is intended to make just as many inferences as the observers do! Thus an observer might report the following sequence: "Tommy crawls up on the table, looks around to see where the teacher is, and then takes a cookie from the shelf." The observer does not really know that Tommy looked around to check on the whereabouts of the teacher; but if he is so convinced that this is why Tommy looked that he is willing to risk censure from his colleagues who are sure to suggest that he is reading too much into the child's behavior, then the coding system ought to be sensitive enough to distinguish that kind of look from another kind. Thus in choosing verbs to describe that bit of looking, one would code "scans environment" (see subsequent definitions) rather than "looks at environment."

Obtaining the Record

At present coding is done from typescripts based upon tape recordings made by a trained observer. In the present setting, these recordings are made right out in the room in full view of all the persons in the group; in the Children's Center setting, the children and adults are so accustomed to seeing a member of the research staff with a portable tape recorder over his shoulder and a microphone in his hand that this observer is treated pretty much as a piece of furniture or one of the walls. (The children have learned that this adult, in contrast to the teachers and to most visitors, does not respond to them, and they quickly lose interest in all non-responders.) In order to be as unobtrusive as possible and to avoid disruption of the classroom program with this open recording procedure, the observer holds the microphone right up to his mouth and whispers into it. The observer thus speaks for the participants in the on-going behavior, and the microphone is held so as to minimize noise from the background. This produces an entirely satisfactory tape recording, superior in many ways to one in which all the actors in a tableau produce their own statements for the tape, which can then frequently not be understood by the person responsible for the transcription. There is nothing more difficult to understand on a tape than a verbalization of a little child whose mouth cannot be seen and who always seems to bang a toy as he speaks. It is not necessary to transcribe the tapes, as coding can be done directly from the tape. However, for training purposes, and for ease in determining reliability, the typed record is vastly superioe.

The point should be stressed again that there is nothing about this procedure which must be kept inviolate. For example, in settings with adequate one-way vision apparatus, it would undoubtedly be better to have the observer behind the mirror and out of sight. In the present setting the in-the-room procedure was adopted both to make the most of a less than perfect physical plant and in order to facilitate comparison of behavior emitted at home and at school. And relatively few homes have one-way vision apparatus! Also, as the observer must, in order to produce a codable record, retain contact with the central figure of the observation, and as little children seem to move about from area to area with such high frequency, most observation stations would not permit this free mobility. Having the observer in the room is a little disquieting at first to students who have always functioned behind the security of one-way mirrors, but after a while one comes to prefer this style of recording.

Suggestions for Observers

While there is considerable flexibility in the type of unit and the type of recording procedure to be followed, one who uses this procedure must train himself rigorously to observe certain rules of observation and reporting without which the obtained records will not contain enough information to permit coding. The first and most fundamental rule is to make certain that the observer never loses contact with the central figure of the observation and that everything done by and everything that happens to or in the immediate vicinity of that central figure must be reported completely. Although this sounds very simple, it is possible to lose sight of the central figure whenever events of high salience are emitted by other people in the immediate environment. In early records made by the authors one can find many examples of this type of attentional wandering. For example, in one home visit made in which the central figure was a 16-month-old infant, her two older brothers were constantly in the picture. At one point they got into a furious fight down on the floor which lasted about one minute and which, to the observer, was a very salient event. Subsequent inspection of the record revealed that the observer had been so distracted by this little bit of brotherly love that she had failed to note one single thing about the reactions of the baby sister (the central figure) to the fight, even to the extent of making note of whether she watched it! With training and practice, however, this sort of attention wandering disappears.

This example serves to illustrate the fact that, with this technique, one does not report _everything_ that happens in a group. However, one attempts, in so far as this is possible, to report _everything_ that the central figure does and that is done to, for, or near him. When the observational arena involves only a social diad, this is very easy; when it involves a large group of active children and several adults, it is quite difficult and takes a great deal of practice.

The second rule for observers is to _report environmental events as carefully as one reports the actions of the central figure_. The major scientific objective of the development of this technique is to permit ecological studies of individuals-within-environments. In most behavioral research, meticulous attention tends to be given to the behavior of the subject of the research but relatively little attention to the environment in which the behavior occurs. To be sure, attempts are usually made to control major environmental influences which are presumed to be influential on the behavior under study. In actual practice, however, this assumption is seldom put to a rigorous test. The APPROACH language was developed to be useful in situations where the environment could vary at will, in which different people could interact with the central figure in different ways, and in which the environment itself could produce stimuli to which the central figure might respond. It is hoped that each record will reveal as much about the environment as it does about the central figure. With this objective in mind, the observer must train himself to be as alert to the events of the environment as he is to the behavior of the central figure. This means that an aside (called a Setting Alert) should be spoken into the record every time changes are made in the dramatis personae of the behavioral episode, the locale, or the degree to which individual options of behavior are permitted (as when free play period changes to story period). It is the goal of this technique to permit a detailed description of behavior-within-environments; therefore, the observer must keep himself as alert to the events going on around the central figure as he is to the behavior of the central figure himself. This means being alert to events to which the central figure could reasonably be expected to respond (as a fire engine with siren at full volume rushing by the play yard) as to the events to which he does respond. Any time such an event is reported in the record, the reaction of the central figure must also be reported.

The third rule for observers is to be scrupulously accurate in reporting the temporal sequence of behavioral and environmental events. One of the purposes of this analytic language is to permit investigations of sequences of behavior, of what leads to what within one person's stream of behavior or within the framework of social interaction. The most parsimonious way of apprehending the elicitors of behavior is by carefully examining temporal sequences of emitted behavior. Because of his rapt concentration on the central figure, the observer may occasionally fail to notice an immediately preceding event until after the subject has responded to it and thereby directed his attention to the event. Thus a record might read, "Tony looks up as Miss Smith walks into the room." Regardless of whether the "adult walking into room" was the true elicitor of "child regards adult," the walking temporally preceded the looking even though the record did not report the events in that sequence. Therefore in the coding it is important to reverse the order of events to read in translation, "Adult walks into room and child looks up at her." It helps, incidentally, to develop the habit of reporting with participial, adverbial, or prepositional phrases.

The fourth rule is equally simple and is that anything worth reporting must be reported in its entirety. The strategy behind the development of a coding system that pays as much attention to the environment as to the central figure is that many of the events going on around a person exert some sort of effect, even though they do not affect him directly or are not intended for him alone. Thus if the central figure is standing near a child who asks a question of a teacher and receives an answer, the central figure perhaps benefits as much from that information transfer as does the child who initiated the inquiry. Similarly, a young child probably learns something about social relations by observing a teacher handle a dispute between two other children or by noticing that a teacher makes a request of another child who in turn complies. Each tableau is incomplete until the full chain of responses has been reported--that the teacher answered the question, intervened in the dispute, and that the child complied. In some of our early records, we found that we were failing to report such environmental occurrences in their entirety; yet without the full chain of events the record is incomplete.

If a potential observer will train himself to abide by these four simple rules--never lose sight of the central figure; report all significant environmental events; keep careful track of temporal sequences; report events in their entirety--he will have no difficulty in producing the kind of records which can be translated into the APPROACH language. Once one has read the manual, obtained a few records, and tried to code those records, one will have no difficulty in determining where observational flaws lie. At the end of this manual, an example of a completely coded record is given. The record chosen is one that was made some time ago rather than after most of the "bugs" of the system had been eliminated. This was done deliberately to help demonstrate the relationship between the record and the coding summaries and to illustrate the type of information package essential to permit coding of every unit of behavior.

Emitted Behaviors

All observed behaviors emitted by the central figure and by the people with whom he interacts or in whose vicinity he functions are coded in terms of the same categories. Thus there is not one set of categories for adults and another for children. The observer must train himself to take in the details of what the central figure does and what other people do to, for, and near him. Any time the central figure attends or reacts to a new or highly salient stimulus in his environment, the nature of that stimulus must be reported as well as the fact that the central figure reacted. In addition, salient stimuli to which a response could reasonably be expected but which fails to elicit one from the central figure should be reported.

Each discriminable unit of emitted behavior (or behavioral clause) is described in terms of four components--the *subject* of the clause (who or what emits the act), the *predicate* (what is done), the *object* (toward whom or what the act is directed), and any necessary *supplementary information* (qualifiers of the action). Each of these bits of information is contained in one or another digit of a five-digit numerical statement which translates the behavior into a form suitable for computer analysis. In the following section, the array of "parts of behavior" currently accepted in the language is carefully defined and the numerals assigned to each element presented.

Subject of the Behavioral Clause (first digit)

The subject of the behavioral clause refers to the person or object that emits the behavior. The same categories are used where relevant to refer to the object of the clause. As the APPROACH language uses only the active voice, it becomes necessary to reverse the position of subject and object to handle the passive voice and to describe emitted behaviors directed toward the central figure. Thus if a record reads, "Mary shoves Jack and is promptly shoved by Jack in return," this sequence of events is coded as Mary shoves Jack--Jack shoves Mary. The subjects used, and the digits assigned to them, are as follows:

0 The Central Figure (or CF) of the observation. This is the person, regardless of age or sex, from whose frame of reference the behavior is described. In the current use of the technique this is always a child; however, it can just as readily be an adult. This must always refer to a single individual or to part of the individual's body.

1 The Environment. This refers to stationary items in the physical-spatial environment-walls, floors, doors, tables, swing sets, jungle gyms, etc. Vehicles other than tricycles and similar movable toys are also coded as part of the environment. Although they obviously move, their movement cannot ordinarily be influenced by the child. Chairs (which young children frequently move around) are coded as objects. Occasionally certain aspects of the relatively fixed environment will be manipulated as objects (e.g., child will manipulate a door knob, scratch at or feel the texture of the floor, play with the seat belts while in the car, etc.); however, for the sake of consistency these are still coded as representing manipulation of the environment.

2 A Female Adult. This refers to any female assuming adult responsibility. This generally means care-taking and supervision of play and is generally carried out by persons who are well into or beyond adolescence. This is what it is meant to convey. If, however, a child assumes a position of responsibility for the supervision and protection of other perhaps slightly younger

children, he is not to be coded as an adult simply because of his assumption of responsibility. Thus, if one child ties another child's shoes, this is coded as child-caretakes-other-child, not as adult caretakes child.

3 Female Child. This refers to any female child other than the central figure.

4 Item. This refers to any portable or manipulable item or article of household or play equipment--toys, books, crayons or paints, records, musical instruments, eating utensils, articles of clothing, water, sand, grass, flowers, etc. These are most commonly called "objects" but are here called "items" to avoid confusion between the "object" of the behavioral clause and a physical object.

5. Male Child. Any male child other than the CF.

6 Group, including CF. Two or more people, either adults, children, or a combination, which includes the central figure of the observation.

7 Group, excluding CF. Two or more people, either adults, or children, or some combination, which does not include the central figure of the observation.

8 Male adult. The same as 2 above, except that this is a male.

9 Setting alert. The only initial digit which does not identify emitted behavior is the number 9. This announces that the subsequent behaviors are occurring within a specific type of setting, detailed information about which will be conveyed in the next four digits of the announcement. The setting codes are defined in the second section of this manual.

If greater variety is desired for subjects (or objects) of the behavioral clauses, then it will be necessary to use two additional digits for each behavior statement.

Object of the Behavioral Clause (fourth digit

The term "object" in the APPROACH language generally refers to the direct or indirect object of the behavioral clause (e.g., teacher hugs child, child gives toy to teacher). With many of the behavioral verbs the direct object is made clear by the predicate itself. For example, if a teacher reads in the school setting, she is most likely to read a book. In this case, it is far more important to know to whom she reads and therefore to permit the predicate to refer to the indirect rather than to the direct object. Whenever the predicate takes the indirect object rather than the direct object, this is made clear in the definition of the verb. For example, the predicate "reads" is actually "reads to," thus clearly mandating a reporting of the individual or group being read to by the reader.

Assignment of numerals for the objects of the behavioral clauses is identical to that for subjects with the exception of the numeral 9.

9 No information. When used as the object of a behavioral clause, the numeral 9 means that there is no information in the fourth digit. Thus the clause "Jessie leans forward" does not have an object and has a 9 for its fourth digit.

Supplementary Information (fifth digit)

The information contained in the fifth digit is essentially adverbial, in that it qualifies the predicate of the behavioral clause. Thus it will tell whether a given bit of behavior was emitted silently or orally, whether it was done in imitation of another person, whether the unit recorded represents a new act or the continuation of an on-going act. Frequently the verb will have no qualifiers, in which case the fifth digit will be coded as containing no information (9).

The array of possible qualifiers is not as extensive as the array of possible predicates in the APPROACH language. A research problem concerned with the "style" of behavior would obviously need to expand this part of the message, which would necessitate the assignment of another digit to the adverbs. For the present purposes, however, the following information has been accepted as adequate:

0 Done ineptly. The behavior emitted was done ineptly, clumsily, messily, or without success. E.g., child puts shoe on wrong foot, drops bead while trying to put it on string, catches pull toy behind the leg of a table due to poor steering, etc.

1 Accompanied by verbalization. Some behaviors must be accompanied by words (e.g., questions, conversation, giving directions, etc.), but many types of behavior may be emitted either silently or with a verbal component. The numeral 1 in the fifth digit means that the emitted behavior was accompanied by a verbalization of the subject of the behavioral clause. The verbalization does not have to be a completely comprehensible word. If an infant vocalizes while manipulating objects, then this pre-verbal type of vocal behavior is nonetheless coded as accompanied by verbalization. Similarly, in the few instances when an item of equipment rather than a person is the subject of the behavioral clause, and when the item produces speech (as a phonograph playing a story record or a song with words, etc), then the sound produced by the object is coded with a 1 in the fifth digit. Also less rigorously, a toy that makes a sound in the course of being manipulated will be identified with a 1 in the fifth digit. It is easy to distinguish these non-human sounds from human speech or attempts at speech by simply scanning for the subject of the behavioral clause.

2 Involving interpersonal physical contact. If a response emitted by the subject of the behavioral clause involves physical contact with another person (objects are excluded here), then this response is coded with a 2 in the fifth digit. (For only one predicate, "gives food to," this numeral in the fifth digit has a special meaning, which will be explained when the predicates are defined.)

3 With intensity. The emitted response was carried out with intensity. This is one of the few categories in the APPROACH language that involves some subjectivity. However, fairly precise limits have been set on the use of the intensity qualifier so that coding decisions are not difficult. The cues for coding high intensity are taken from the observer's record. If someone is described as shouting rather than speaking, running rather than walking, hitting very hard, gulping food voraciously, etc., then these predicates are accompanied by a code of 3 in the fifth digit.

4 In a specified manner, place, or time. This qualifier is used only as a technique for describing requests or commands directed to another person, or a response to such a request or command. Thus a teacher might suggest that a child color, or she might request that he use a particular crayon or color only in a specified place. Only the latter type of request would be coded with a 4 in the fifth digit. If the child did color as requested, his response would have a 4 in the fifth digit.

5 In a manner, place, or time other than that specified. This is a sequential qualifier and is used only to identify emitted responses that disregard requests to do something in a specified manner, place, or time. Thus if an adult requests a child to color around the edge of a particular piece of paper and the child responds by coloring in the middle, the adult's request is qualified with a 4 in the fifth digit and the child's response by a 5.

6 Imitatively. An act of emitted behavior is done in direct imitation of a similar response emitted by another person. The imitated response should always be identified in a code either immediately prior to that reported as emitted imitatively or else a few codes back in the record. Thus the record must tell whose behavior is being imitated as well as the type of behavior that is imitated.

7 In continuation. As the APPROACH language is currently used as a behavior unit analysis rather than a time sample analysis (although it could just as readily be used with the latter), it was necessary to devise some procedure for describing behavior that continued for relatively long periods of time. Accordingly, the convention has been adopted that if five seconds elapse and the CF is still emitting the same type of response, or if someone interacting with the CF continues to emit the same type of response, then this prolongation would be recorded with a 7 in the fifth digit. A response is identified as continued only if the behavior has not been interrupted by any different response carried out by the same person. The record may report intervening behavior emitted by another person. For example, if the record reads, "Teacher reads, Johnny attends; teacher reads, Johnny attends; teacher reads, Johnny looks at child sitting next to him; teacher reads, Johnny attends," the second, third, and fourth statement about the teacher's reading would be coded as continuing (the first is assumed to be the first such statement in the record at that point and is thus not a continuation), whereas only the second statement about Johnny would be so coded. The "attending" reported in the fourth statement is in effect a new unit of attending, even though it refers to the same stimulus.

8 Complexly. This qualifier permits codes of greater complexity to appear in the record than would be possible otherwise; it identifies a

5-digit statement that is the second half of a double code. No matter how many behavioral predicates one might put into such a system, certain behaviors would undoubtedly occur which seemed a blend of one or more types. For example, a teacher might interfere with the movements of a child by giving him a hug. Is this interference or affection? The qualifier identified by the numeral 8 permits coding both parts of the response; it appears on the second of the two codes that refer to the complex response.

9 No information. Some behavioral statements need no qualifier and are terminated with the numeral 9 signifying that the verb stands alone.

The reader will immediately realize that the qualifiers are not as mutually exclusive as the choices available for subject and object. That is, a response might be accompanied by a verbalization, might include physical contact, and might be emitted with intensity; yet no combination 1.2.3 code is possible. The rule arbitrating conflict among the verbal, tactual, and intensity choices used in the present investigation is that when in doubt, code the lowest number (verbalization) unless it would be completely obvious from the verb that the response had been verbal. For example, several predicates require language (e.g., reads, asks questions, praises, makes a request, etc.), and in those instances the use of 1 in the fifth digit is essentially redundant. The numbers 4 and 5 are used only in certain requests, and as requests must be verbal these numbers do not conflict with 1. If they are needed, they take precedence over all other possible qualifiers. Finally, 6, 7, 8, and 9 will not be in conflict among themselves or with other possible qualifiers. Although this slight illogicality appears unfortunate, it appeared more acceptable than the alternative of using two digits for the qualifiers. In practice, the conflicts have arisen very infrequently.

Behavioral Predicates (Second and Third Digits)

In this section all the predicates of the behavioral clauses will be defined and detailed coded examples presented. Although logically the predicates should have been introduced prior to the objects and adverbs, their introduction was delayed until all other components of the behavioral clauses could be defined and their assigned numbers presented. This was done to make it possible to include detailed coding examples, which is necessary for full comprehension of the technique. The information contained in the predicate is the heart of the message, and it is here that other investigators wishing to use the technique will probably have the greatest difficulty. Therefore, in the following section, one or more examples will be presented to clarify each predicate. As clarification is sometimes facilitated by examples of what is not meant by a particular category, some of the examples will use predicate numbers not yet defined. Thus if two unexplained numbers appear in the second and third digits of any example, one can quickly clarify them by scanning ahead or backwards until the number is encountered or by referring to the summary table listing all behavior and setting categories presented in the appendix.

Prior to defining the predicates, a word should be said about the numbers assigned to the various predicates; unfortunately, these are not always quite as logical as might be desired. This illogicality was occasioned by the fact that numerals were assigned to the categories at every step in the evolutionary process when it appeared as though no new categories would be needed. The ability to transcend retroactive inhibition has its limitations, and occasionally old numbers which should have been discarded were kept in service. In this final translation of the behavioral predicates into a numerical system, where possible one or more contiguous numbers have been reserved for each of the major response areas in order to permit the introduction of new predicates into the system in numerical positions that minimize any difficulties in memorization of the numerical code. Thus although there are only 65 predicates currently in use in the technique, 89 are possible within the present coding framework.

In each of the examples following the category difinitions the central figure is always a child. However, it should be reiterated that other investigators might wish to have an adult as the central figure, in which case that adult would be designated with the 0 code in the subject and all children would be designated by either the number 3 or the number 5. Actually, none of the numerals here described should be interpreted as fixed, as other investigators could freely reassign the numbers without doing any injustice to the technique. Any computer program used with this technique must obviously begin with a complete listing of the categories referred to by the different numbers in each digit.

Predicates in the APPROACH language cover eight reasonably homogeneous areas: (1) environmental contact, (2) information processing, (3) food behavior, (4) manual activities, (5) negative reinforcement techniques, (6) positive reinforcement techniques, (7) body activities, (8) control techniques. In addition there is one miscellaneous category which contains a few assorted predicates which do not exactly fit any of the other areas (or else which got squeezed out of numbers in deciles where they might otherwise have been placed). With the exception of food behavior, each of these areas has been assigned one decile of numbers, even though they might not all be needed or used. This kind of numerical assignment permits occasional analyses purely in terms of the first of the two-digit numerical predicates--i.e., permits grouping all types of negative or all types of positive reinforcement without attention to the specific manifestation of the negative or positive response. This type of one-digit analysis is not applicable to all categories; for instance, being in environmental contact and being out of contact are two quite different types of behavior, even though they are both placed within the major category of environmental contact.

In the following pages each of the major areas will be defined, specific predicates within each area introduced and defined, and coding examples given.

00-09 Environmental Contact

This category conveys information about the attentiveness of a central figure and the degree of visual and auditory contact maintained with people, items, or events in the environment. The interpersonal contact categories in this group refer to clearly interpretable moves made by someone in the social group to establish or maintain or to terminate contact with another person or persons. Such responses must involve more than locomotion toward or away from another person and must give clear evidence of interest in a certain degree of contact with another person.

00 Ignores. The central figure is essentially non-responsive to people, items, or events. This category is used to refer not only to periods of vacant staring but also to describe situations in which a clearly supra-threshold stimulus is emitted within the sensory range of a CF without his response. If a child specifically rejects (rather than ignores) a stimulus, this response receives a code other than 00 (such as 36, resists, if a child averts his head as an adult bends to kiss him). This predicate is also applicable to the situation in which a person apparently perceives a stimulus (e.g., a teacher apparently hears Johnny ask for the paste but is too busy to attend at the moment) and does not respond.

21461	Teacher reads to group.
00079	Murray is staring vacantly.
27001-01721	"Can you say cat?" asks Miss Brand.
00029	He doesn't reply.
35432-33508	Jenny steadies self by pushing on Anthony.
00039	Anthony ignores.
02640	A piece of the puzzle Donny is working on falls
46091	to floor with a clacking noise.
00049	He doesn't notice.
00000	Mary faints.
00003	Susan has an epileptic seizure.

01 Attends. The subject attends to a stimulus, or suddenly directs attention to a person, item or event. This is usually indicated by visual regard; however, occasional episodes of "listening" will occur when the subject is not looking directly at the source of the stimulation. If the event attended to is new and distinct (i.e., someone speaks to the subject; a ball suddenly rolls down the hill), the occurrence of that event is coded prior to the indication of attention on the part of the subject. If, however, attention is directed to a person, item, or event that was a stable part of the environment (e.g., a picture on the wall, a child seated at a table near the subject) then only the attention per se is coded. In order to facilitate coding in this system, it has been necessary to establish a number of coding hierarchies, one of which applies to attention. It is frequently a component of responses which will be coded in one of the other categories under which attention can be logically subsumed. For example, in order for a subject to carry out object manipulation, or to walk toward a specific person in his environment, attention must be directed to the object or person. In these situations where attention is implied, it is not coded but is subsumed under the other category. Only where attention is the predominant response should it be coded in preference to other behaviors which are more descriptive.

00139 Sue looks at Liza sitting next to her.
but
04229 Sue looks up and smiles at teacher.

02749 Larry makes a ball out of his play dough,
00149 looks at it.
but
02749 Larry rolls his play dough with rolling pin while regarding it.

16091 Jerry turns head toward sound as he hears
00119 footsteps out in the hall.

21661 Miss Karsh asks the children, "What do we put on pancakes?"
71721 Some of the children respond "Syrup."
00129 Edward regards teacher silently.

C1 Attends (cont'd).

02749 20109	Georgie puts a record on the phonograph. Miss River stands by attentively watching.
50221 00179	Perry runs toward Miss Aron yelling "Hi!" Roxie (the CF) stares up at them.

02 Establishes or maintains contact. One person moves toward another person or activity, as when a child walks over and leans his head against a teacher's knee, or runs to the door to greet a person walking in, or joins a group playing in a particular area. If the contact established involves actually touching another person, then the response will have a 2 in the fifth digit. The object of any clause using this verb must be a person or persons; i.e., establishing contact with a toy or other item is not coded. When close physical contact is established (e.g., adult takes child in lap), this is indicated by a 3 in the fifth digit. This may seem contradictory in that 2 in the fifth digit defines interpersonal tactual contact. However, after a child is in an adult's lap, any number of other behaviors might occur which one might want to associate with this close interpersonal situation but which could not otherwise be identified as having occurred while the child was being held by the adult. Termination of this close contact will also be tagged with a 3 in the fifth digit, thus permitting one to determine for exactly how long the contact lasted. Movement in the direction of another person without some gestural, verbal, or physical evidence that contact is being established is coded as locomotion toward rather than establishing contact with that person.

20201	Miss Lowe walks in and says, "And how is Georgie today?"
75619	Miss Carp is taking some of the children into another room.
00279	Jackie walks over toward the group milling there.
65619	They all go out in the hall.
00222-04428	Anthony runs over to the teacher and hugs her.
30201	Emmy comes over to Robbie, saying "Rock, rock," and
34509	tries to help rock Robbie in the chair.
07089	Toby puts arms up in gesture asking to
80203	be lifted up by Mr. Jordan.
60229	All the children crowd around the science teacher.

02 Establishes or maintains contact (cont'd).

00223	Tammy climbs up on her mother's lap.
04222	She sits there very contented.
04422	Tammy holds her mother around in a hug,
00323	gets down from her lap.
00282	Lisa takes Mr. Salk's hand
65612	as they walk to the gym.

03 Terminates contact. One person turns or walks away from another person or activity. In younger children this will often take the form of withdrawal of attention or locomotion away from another person. In older children or adults, it is often accompanied by some type of announcement and may include a component of negative affect, in which case the affect (displeasure) would appear as the second half of a double code. When a person (child or adult) terminates what has been close physical contact (being held in lap, arms, etc.), this termination is coded with a 3 in the fifth digit.

23001 20309	Mother says, "Uh-uh" and walks away from Daryl (who has asked for more paste).
00323	Polly gets down off Miss Scrip's lap.
21701 20302	"Down" says the teacher as she lifts the baby down from the diapering table.
20302	Miss Jayce takes her arm away from around Elsa's waist.
70369	Two children wander away from the group which is at work.

04 Scans. The subject looks about the environment actively scanning it for some particular element or person. This may involve sequential focusing on different persons in a group, rummaging through a toy box (in which case the response would be double coded with item manipulation) or simply looking inside a storage unit or on a shelf for some particular toy. Proof of actual search must be fairly solid, usually (1) a verbalization (coded 1 in the fifth digit) indicating that the person is actively looking for something or (2) subsequent grasping of a specific item with abrupt cessation of scanning as though a goal has just been attained. Not infrequently one will see fairly fast sequential bursts of attention, particularly from a young child, that cannot truly be said to represent scanning. In such instances the rule is to code conservatively, using 01 unless there is strong evidence of an active search.

20419	Teacher looks in cupboard for playdough.
02649 00449 02619	Barbara rummages in the bead box, picks up several, discards them; picks out one to put on her string.
00419 05643	Ethan looks around the gym, spies an empty bike and runs towards it.
00419 01621	Jessica looks in the toy box for the lid to the teapot, asking her mother, "Where is it?"
20479 21671	Miss Brown looks at children waiting by door -- "Where is Andy?" she asks.

10-19 Information Processing. This section covers some of the major teaching and learning situations that characterize any social environment and covers much of the ordinary domain of cognitive interpersonal responses. Although such predicates will usually involve verbalization (identified by 1 in the fifth digit), at least four (confirms, shows, writes, disconfirms) may occur without words. In those instances any conflict in the fifth digit must be resolved in favor of the 1 indicating verbalization in the event it occurs. For the remaining six categories, a fifth digit conflict may be resolved in favor of any of the other qualifiers. As the APPROACH technique was developed in part to serve as a non-test assessment of a child's responses in a nursery school setting as well as to describe the type of input he received, this area is obviously a very important one. At least two responses (confirms and disconfirms) could easily have been grouped with the major areas of positive and negative reinforcement. However, they have been distinguished from statements involving positive and negative sanctions for behavior in order to permit reporting of those instances in which information itself is permitted to carry the needed feedback to the child regarding the appropriateness of his behavior.

10 Confirms. Information is given which indicates that the pattern of behavior being emitted is appropriate or correct, or which confirms to another person that he or she has correctly made some informational assumption or hypothesis. Examples include the simple statement "That is right," an affirmative head shake, or an affirmative statement following a question that implied something about the person to whom the question was addressed. The act of confirmation may follow a simple request for information ("Is this your hat, Mark?" coded as 16) or it may follow an expression of solicitude ("What's the matter, Mark, don't you feel well?" coded as 41) in which the searched-for cause had indeed been identified. If in either of those examples the questioner had made incorrect assumptions and was so informed by the person to whom the question had been addressed, this type of response would be coded as disconfirmation (15). The predicate "sanctions" (40) is similar to confirms. The two are to be distinguished by 40's reference to action and 10's reference to information. Sometimes an adult will ask in a general way a question ("Who wants to go outside now?").which is informational and implies a request for confirmation; i.e., the message is received by each individual as "Do you want to go outside now?" An identification of self in such instances ("I do") is coded as confirmation, while a denial is coded as disconfirmation (15).

21661	Returning to flannel board figure, Teacher asks, "Is she dressed for a rainy day?"
61021	Children reply, "Yes" with head nods in affirmative.

21661	"Do you want more milk?" asks Linda.
01021	Billy answers "Yeah".
51021	Tony says, "I want more milk."

26102	Miss Lind is cleaning sand out of Jackie's eye.
24101	She asks, "Is it O.K. now?"
01029	Jackie nods.

02749	Mike makes a small circle in the playdough and
01721	says, "A baby one."
21001	Miss Kelly says, "Yes, a baby one."

10 Confirms (cont'd).

27101-02744	Mrs. Gold says, "Color the circle."
02745-01021	Jennifer says "O.K."--but goes on coloring the square.
21601	"This is not a very easy puzzle, is it, Carol?" asks Mrs. Fischer.
01021	"No, it isn't," she replies, shaking her head. (Although this involves a negative statement, it is not a disconfirmation; rather it confirms an opinion expressed in a negative form.)

11 **Shows (to) or demonstrates (for).** This is the "show" part of the traditional "show and tell." It also involves transmission of skills via modeling or demonstrating how to do something. This category covers such behaviors as turning around a book being read so that children may better see the pictures. If showing something clearly connotes a request for action (e.g., a non-verbal child's pointing to a desired toy on a shelf, communicating via gestures "Give it to me"), this is coded as a non-verbal structuring request.

51101	"See my sneakers," says Alan to him (CF).
01721-01129	Abe says to Miss Kay "Tractor, tractor" and points to it.
21169	Teacher is holding up book.
07021-21109	Murray says, "I want to see."
22749-21108	Miss Drew turns the egg beater in the soapsuds.
27101-02746	Then says, "Now you do it."
02746	Jackie turns the beater and says,
01121	"See me do it."
21601	Mrs. Kaufman says, "How many is a couple?"
21701-21109	answers herself, "Two," holding up two fingers.
21101	Mrs. Black shows him how to put the peg in the peg board, saying, "See it fits in this hole."

12 Communicates or converses. This category refers to possibly brief and casual questions or statements relating to routine situations that will occur in any social group. They are often adult to adult or child to child in direction. In fact, the statement "What time is it?" will be coded 12 if adult to adult and 16 (inquires) if adult to child. The focus of the present research is such that adult to child encounters that stimulate thought are strongly encouraged, and the above example represents the kind of effort given to make children think. With the adult to adult encounter, however, it is unlikely that the subject would think of the question as designed to clarify the other adult's concept of time. It should be noted that this category is not really necessary and that the technique could very well get along without it. It was introduced, however, to permit those informational transactions clearly designed to teach to be distinguished from ordinary conversation. Also it permits classification of murmured asides or incomprehensible communications which otherwise could not be handled. Sometimes there will be confusion between these bits of low-level conversation and other predicates accompanied by a verbalization. The best rule for handling any possible confusion is by reliance upon the object of the clause. If the object of the conversational remark can be determined by simply indicating that some action has been carried out with verbalization, then this is sufficient. If, however, the person to whom the remark was directed could not be so determined, then it is necessary to code the action and the conversation separately. For instance, if a child is manipulating a toy and says something to a friend nearby, the object of that clause must be 4 (item) and a 1 in the fifth digit would not have informed about the person to whom the remark was directed. Thus the coding would have been 02749-01231. If, however, the child had been manipulating the toy and had made a remark to no one in particular, this type of action would be coded as 02741.

12 Communicates or converses (cont'd).

05399 01251	Bobby claps hands together and says "My hands are sticky" to Stephan.
21201	Mrs. Cook says, "We're going outside to play."
21261 24308	Miss Lee says, "Oh what a big pile of sand Jennifer has over there."
21201 23308	Mrs. Crain says, "Oh boy, you've got sand all over yourself."
27001-01224 01224	Mother says, "What's the secret word?" Amy says, "Please."
21201	Mrs. Mann says, "Your hands have to be wiped." (Here this is said to an infant who is not expected to wipe his own hands.)
02611	Eddie says, "I want a truck," and he picks out two trucks from the toy box.
50202 51201 01251	Tony takes Murray's (CF's) hand, murmurs unintelligibly to him and Murray says, "Huh."
26336 21261	Mrs. Drew finishes the story, comments on it to the children.
21221 00179	David looks up at teachers who are talking about the children's activities.
00151	Baby Martha verbalizes while looking at Kim.

13 Writes or draws (for). The subject writes or prints words or uses crayon or pencil for representational drawing. Thus, with preschool children, this is far more likely to be an adult than a child category. It does not take a direct object and thus might be coded 21399. If, however, the writing or drawing is carried out for a particular person, this person is identified as the object in the fourth digit. Thus, a teacher who writes a child's name for him on his drawing has her response coded as 21309 (or 213 3/5 9). Scribbling or daubing with paint is handled by the use of 26 or 27.

27101	Miss Frank asks, "Peter, can I put your name on
21309	your paper?"
01029	He nods,
21309-00129	watches while she writes his name
21309	Mrs. Glanz sticks her finger in the sand
21701	for Paula (CF) saying, "Here are some eyes and a nose," as she draws.
21399	Mother is busy filling out form.
00129	Pamela watches her.
01396	Attemtps to write letters, too.
01201	"Let's see," Jessica says to herself as she starts
01396	to trace name.
01399	Tommy carefully draws a circle.

14 Reads (to). The subject reads from a book to one or more persons (including the self). With an adult this code is not to be used unless true reading occurs. That is, a generally used technique for "reading" to young children is to show pictures and to talk about the book. For that pattern of story telling the codes of show (11) and informs (17) would be used to describe what is going on at any given moment. In order for 14 to be coded, the person must be reading from a written text. (Note: even though the observer might not know all the words to a given book, it is usually not difficult to tell when a teacher is reading and when she is improvising. Most book sessions will involve some of each of these kinds of behavior.) Coding for a child is a bit more relaxed, exemplifying a double standard occasionally allowed in the APPROACH language. That is, if a young child sits and turns the pages of a picture book for himself and "reads" some of the lines correctly (or almost so), this is also coded as reading (but with a zero in the fifth digit). If a child does this and merely mumbles or utters incomprehensible babblings, this is coded as 01101 (showing pictures to the self with verbalization).

21461	Teacher reads to group.
00149	Mary regards book.
21761	Teacher comments, "They use trains for lots of things."
00129	He attends to teacher.
21469	Teacher continues reading.
27401	Mrs. Engel asks, "Would you like me to read you a story?"
21401-03029	David shakes his head, "No."
00149	Sharon holds the book up close to her nose.
01400	"Stop. Stop that ball," she reads to herself, having memorized the story.
21429	Mother sits and reads magazine.
37401-31401	Vicky says to Cathy (CF) "I'll read you a story about a little bear.
00039	Cathy says nothing, but
31400-31908	Vicky turns pages and makes up a story pretending to read to Cathy.

15 Corrects or disconfirms. The subject corrects false information or disconfirms a false assumption made about him or some person or object in the environment. Responses in this group include the simple answer "No" (making certain that it is an informational "No" rather than a negative or protest "No" which would be coded 30) and statements or gestures indicating that something is not being done correctly. As was indicated with confirmation (10), the disconfirmation might relate either to a straight request for information or to a solicitous question based on a false premise ("What's the matter Mary Jane, did you hurt yourself?" 24101 "No," answers Mary Jane. 01521).

02740	Child is trying to put a peg in a hole, but ineptly.
21501	"That hole is too small," explains Miss Hall.
27001-01124	Mrs. Isaacs asks, "Can you point to your nose?"
01120	He points instead to another child's nose.
21501	"That's Jackie's nose. Where's your nose?" corrects
21601	Mrs. Isaacs.
21100	Mrs. Jenks points to her eye and asks
21601	Glen, "Is this my nose?"
04223	Child laughs and corrects teacher
01521	saying, "No, that's an eye!"
21661	"Now what's he doing?" questions Miss Karl.
01720	April says, "Sleeping."
21501	Miss Karl says, "No, he is not sleeping.
21701	He is eating breakfast."
00149	Lois looks in her paste cup and says,
07021-22504	"I want a lot of paste."
21501	Mrs. Marks says, "That is a lot of paste."

16 Inquires. This refers to asking questions the substantive content of which refers to information and the answers to which involve more than granting or withholding permission (40 or 30), clarifying routines (12). Samples include asking for labels ("What do we call that?"), for memories ("Who remembers the name of the monkey that was so curious?"), for the completion of incomplete sentences ("Yesterday we went to the __________?"), for confirmation ("Is this the way a bird flies?"). Some questions are more conversational than informational, but again if they are adult to child and if there is any doubt about their intent they should be coded as 16 rather than 12. Thus "Who has seen this missing piece of puzzle?" may be a simple routine inquiry emitted by a teacher concentrating on restoring order to the room. However, it might well serve to stimulate thinking about a particular shape, about a previous encounter with the puzzle, etc., and thus merit being regarded as an informational inquiry from the child's standpoint. Anytime 16 is followed by either 10 or a 15, this means that a tentative hypothesis has been put forward which has either been strengthened or refuted. Sometimes a good teacher will ask a question incorrectly ("Do we see with our ears?"--21660), which is indicated by the 0 in the fifth digit. The answer of "No" (61521) disconfirms her hypothesis correctly, whereas the answer of "Yes" incorrectly confirms it (61020).

Occasionally requests for information may be tinged with a request for reassurance; or, stated another way, a request for confirmation may indicate insecurity or anxiety on the part of the questioner about his adequacy. Thus the simple question, "Is this right, teacher?" should be coded 01621-03198 if accompanied by any evidence of anxiety.

Some questions are more rhetorical than informational ("How are you today?") and may be intended more to help establish contact (02) than provide information. Another important type of question frequently directed to young children is a

16 Inquires (con't).

type which stimulates action rather than an information exchange. This is the structurizing question which gains attention and predisposes to action ("Who can guess what is in the box over on the table?"). These are usually directed to the group rather than to any one individual. They are coded as structurizing requests (70) rather than as informational inquiries. The general rule for distinguishing between these categories is that if the expected response to a question calls for a predicate codable from 10 to 19, then the question should be coded a 16. In addition, inquiries which are predominantly expressions of solicitude are coded as 41 even though the responses are regarded as information (10 or 15).

21169 Mrs. Nelson holds up two balls and asks
21661 the group, "Which is the little one?"

21661 "What color are they?" she asks.

17 Informs or teaches. This is the declarative version of information transfer and involves the giving of information to another person. Examples include labeling, explaining, discussing, clarifying, etc. There will be some confusion between this category and 12, conversation. The distinction is to be made in terms of the extent to which the teacher uses declarative transfer to transmit new information or reinforce old information in a structured and almost formal manner. Complexity of information transmitted is not a basis for distinguishing between the two, in that the simple labeling "Ball" for an infant carries quite a load of information and should be considered as formal discourse at an appropriate level.

21731 Barbara (CF) watches teacher explain to
00179 another child (female), "This is Barbara's coat."

04229 Charlotte smiles at Dr. Orput (female) who
21701 remarks, "Charlotte is happy today."

21761 Miss Parsons explains to the group that they have
to stroke the baby chicks very gently so the
chicks are not frightened.

61261 The children are talking about a doll and the
teacher comments, "Our doll
21761 needs a new dress and some jeans."

18 Informs about culture. This is essentially a mild form of negative reinforcement which relies on information rather than action to influence the likelihood of recurrence of a response. It is responsive to some act previously emitted by another person and consists basically of reminders about rules. It involves a transfer of information, as do all the codes in this decile, but information that relates more to a developing moral code prescribing standards of behavior than to new information about the environment per se. It will most typically involve moralistic reactions to the behavior.of another person ("Nice children do not hit other boys and girls") or, after a bit of misbehavior has been dealt with, a restatement of the rule covering that type of behavior ("We don't climb on the tables in nursery school," said as the teacher lifts the child down from the table). The same type of response emitted in a clear attempt to influence the behavior of the child in an anticipatory fashion will be coded as a structurizing facilitative or inhibitory request (see 70 and 72 below). Thus in the second example, if a teacher says the same thing without making any physical attempt to get the child off the table, one can reasonably well assume that she is making the statement to try to get the child to climb down, in which case her response would be coded as an inhibitory request (to be explained below).

27001	Miss Quick says, "Sh-h, Joey," and as
05191	he quiets she observes, "We don't
05191	talk when someone is singing a song
21801	for us."

05710	Robert is climbing on the table.
23501	Mrs. Reardon says, "Robert!"
05199	Robert climbs down.
21801	Mrs. Reardon says, "We're not supposed to climb on tables."

19 *Role plays (with)*. This category has had some difficulty finding a proper name, but perhaps some of the previous names assigned to it might help clarify what is meant. Originally called creative cognition, and then elaboration, it was intended to refer to imaginative and creative verbalization and use of materials. However, some play activties which transcend the objective properties of a stimulus do not impress one as overwhelmingly creative, as when a child perseveratively says "Beep beep" while riding a tricycle. The final label, role plays perhaps best encompasses the range of behaviors covered in the category. It thus means the assumption of any other than non-self characteristics in play or conversation. Thus a child who walks around with a fireman's hat in his hand is merely handling an article (26) or manipulating one (27) if he puts it on his head. But if he says, "I'm a fireman and I'm on my way to put out a fire" he is role playing. In order for 19 to be coded, an elaborate and meaningful gesture or verbalization must occur. Except in rare situations, role playing will represent an elaboration of some other type of activity (object manipulation, large muscle activity, etc.) Therefore, frequently the verb 19 will appear as the second half of a double code. Thus if a child is playing with dishes alongside another child (female) and then looks up and says, "Would you like some tea?" this episode would be coded 02749-01938 (while manipulating an object, child role plays with another child). It will be noted that the fourth digit in the second half indicates the person who was the recipient of the role playing remark. As 19 almost always involves verbalization, (the only exception being creative gestural elaboration), there is little loss in information involved in having to use the 8 in the fifth digit of the second part of the statement. Role playing assumes a certain unequivocal level of the behavior. Simple use of articles or materials (child steps into high heeled shoes and walks about the room staring at playmates) is not to be coded as 19 in the absence of proof

19 Role plays (with) (cont'd).

of true role-playing (an adult gesture, a remark). Similarly, assumption of certain characteristics of a real or fictional person or object is not, in the absence of confirming statements, sufficient evidence to warrant a 19--e.g., making monster faces or gestures. This type of behavior would be coded 37 (threatens) in the absence of remarks such as "I'm Frankenstein and I'm going to get you," in which case they would be coded as 037[3/5]1-019[3/5]8.

21901	Aide takes pot and says, "Let's make a cake."
22749	She turns the pot over and empties the sand carefully so it holds its form."
60141	They says, "Oh, look at the cake."
02741	He is pushing the tractor with a plow in front about in the sand making
01921	a humming motor noise. He says, "I'm making a road," to Mrs. Brown.
31901	Adrien says to him (CF), "A boogie man is in
31109	there," and points to cubby hole.
37301	"Don't play that kind of monster," Adrien
03734-01938	says to Murray. Murray breathes heavy
03735-01938	noises like a monster at Adrien.
37101-01934	Adrien says, "You be the Batman, now, O.K."
03735-01938	Murray makes a monster face at Adrien.
31961	Ann comes over to them and remarks "We need a policeman to get those monsters."

20-24 Food Behavior. The five predicates in this area were among the last to be added and could easily be eliminated by investigators likely to be taking samples of behavior that would not include meal or snack time. In a nursery school setting, however, snacks and meals appear to occupy a significant portion of the day, and it was deemed important to distinguish this particular pattern of caretaking and object manipulation from patterns that did not involve food. Originally "food" was one of the choices of items defined for the fourth digit (e.g., clause could read "child manipulates food"), and thus food handling did not differ from the handling of other articles. However, as "food" could not very likely be the subject of a behavioral clause, and as most of the other grammatical statements involving items used the dative rather than the direct object, this assignment wasted a much-needed numeral for subjects. Accordingly, it was decided to separate food handling and transporting and to assign a separate subset of digits within the decile originally allotted to item manipulation. The rather awkward generic term "food behavior" has been retained to describe the various predicates, with the common denominator being that they all have something to do with feeding, ingestion, manipulation, or disorganization with food.

20 Gives food (to). This category covers any activity that has to do with the serving or ingestion of food. It may involve the work of an adult directed toward a child (feeding), or it may involve self-directed food behavior (eating). Whenever used it must have an indirect object indicating who is fed. If the adult talks to the child while feeding him, this will be indicated by a 1 in the fifth digit. If the adult holds the child while feeding him and intermittently directs remarks to the child, then the initial holding action will be coded 20203 (intense tactual interpersonal contact), with each feeding action or 5" interval coded as 2200 9/7/1 etc. as appropriate. As self-feeding with utensils is regarded in our culture as obviously more mature than finger feeding, a distinction is made between the two types by means of a special assignment of one of the numerals used in the fifth digit. If self-feeding involves either the fingers or holding the bottle and sucking, this type of response is coded with a 2 in the fifth digit. This involves no incompatibility for the fifth digit, as it ordinarily refers only to interpersonal predicates and could not be misinterpreted in a clause that has the name numeral for both the subject and the object. As in general it refers to tactual activities, this appeared to be a good extra use to which it could be put. If self-feeding involves the use of either a spoon or fork, then the customary rules for the fifth digit apply. When sucking is non-nutritive (thumb, blanket), it is coded as perioralizing (52).

02009	Polly picks up her glass and drinks her milk.
07023-22009	"More raisins," Brian yells out to the teacher.
02002	Annie eats her jello with fingers.
27001	Miss Nasp says, "You need to use your
02009	spoon."
02002	Annie licks her fingers and looks at
00129	looks at Miss Nasp.

20 Gives food (to) (cont'd).

20203	Miss Walsh holds Maxine and
22001	gives her a bottle, saying, "Wake up, honey."
02009	Maxine sucks.
22007-21708	Miss Nasp, holding the bottle, says, "Bottle."
02002	Alan stuffs all of the raisins into his mouth.

21 Takes or handles food. The object of the behavioral clause distinguishes the two major uses of this category. If the predicate means "takes from" then the object of the clause indicates the source from which the food was taken. For example, if the record reads "Jane picks up her milk glass" this is translated as "Jane takes her milk from the environment" and is coded 02119. The "handling" part of the predicate is defined as rudimentary manipulations performed with pieces of food. For example, infants will often handle (wave, bang with, fondle, poke at) a cracker or cookie between bites in much the same way they would handle a toy. If 21 refers to this type of behavior, then the fourth digit will always be 4, indicating that the person is handling food (21) as though it were an object (4). There will be some grounds for confusion between this category and the one to follow (takes or manipulates food), where essentially the same ground rules apply. If the taking or handling involves hands or fingers, then the appropriate code is 21. If the taking or manipulating involves the use of a utensil such as a spoon, then it is coded as 22. Thus lifting a cracker from a tray with the fingers will be coded as 02119; lifting a spoonful of spaghetti from a bowl will be coded 02219. Any time 21 means "takes from," the object must not be the number 4 (item); if the fourth digit is a 4, then the verb means "handles" rather than "takes from." Thus if the child takes food from a tray sitting on a shelf or table this is coded as taking food from within the environment; if from a tray held by a person, then from a person (2). In settings where the manual activities of the children can be expected to have reached a fairly stable level, these two categories (21 and 22) could easily be combined. In the present investigation, however, where the APPROACH technique is being used to signify increasing maturity over time, then this is a worthwhile distinction.

21 Takes or handles food (cont'd).

02141 Nancy says, "Aha, I got it," while holding
01178 up her cracker to the other children.

02119 Chris picks up a cracker from the floor
06601 and chants "a cracker, a cracker."
06149 He brushes it off.

22 Takes or manipulates food. This category refers to more complex manipulation of food, as indicated above. In addition to "taking with utensil" it also refers to activities involved in the preparation and serving of food--getting food distributed from tray to table, pouring milk into glasses, serving food on to plates (when the child is not there to be a direct receiver, in which case it would be coded 20), etc. It also identifies formal teaching activities that involve food, such as preparing pudding or jello in a classroom demonstration. While it will on the whole be used more as a predicate when an adult is the subject of the behavioral clause, it will also describe the relatively complex activities carried out by the children that are directed toward self-help at mealtime--pouring their own juice or milk, serving themselves from a bowl that is passed, returning empty dishes to a collecting area, etc. As was described for 21 above, when the verb means "takes from" the fourth digit must specify the source; when it means "manipulates," the fourth digit will always be 4. If the child manipulates an eating utensil in a way that has nothing to do with eating, then this is coded as either simple or complex object manipulation (26 or 27, as defined below). If a child serves himself with a spoon and spills the food, this is still coded as 22 with a 0 in the fifth digit, rather than as 21.

02249	Louise carefully takes the peanut butter on the knife.
27101-02144	"Hold your cracker straight," says Lucille.
02144	She does so and
02249	spreads the peanut butter on his cracker regarding it intently as she works.

23 Transports food (to). This category refers to the transporting of food from one part of the environment to another, or from the environment to the immediate vicinity of one person or a group of persons. The verb takes an indirect rather than a direct object and reports on the destination of the food (a spot in the environment, a group, a particular child, etc.). In the Children's Center setting, the transporting of food is a fairly noisy function (mobile carts rattle down the hall) and often serves as a tableau to which the children respond. If the transporting involves an auditory stimulus (which it usually does), even though the person transporting the food does not verbalize, the response is coded with a 1 in the fifth digit.

02319 Peter carries his milk to the table.

24 Disorganizes with food. This category refers to the smearing, messing, or throwing of food in a way that clearly involves behavioral disorganization. It is equivalent to the general category "disorganizes" (64) but refers specifically to the use of food in such behaviors. If only food utensils (spoons, dishes, etc.) are used, then the disorganization would be coded as 64 rather 24. Actual pieces of food must be manipulated. The expected fourth digit for this type of response is 9 (no information), as disorganization by its very label implies abrogation of precise behavioral controls. If the disorganization should affect another person, as when a plate turned upside down splashes food on a child sitting adjacent to the subject), the 3 may be used in the fourth digit (interpretable as "subject disorganizes with food and affects another child"). If, however, there is a clear assault with food (as when a child takes aim and throws food at another child) the assault is coded first and is accompanied by food disorganization as the second half of a double code (038 3/5 9-02498).

03839 Paul bangs his carrot sticks
02498 on Lissa's head.

02499 Mark pours his milk out onto the table.

25 Transfers item (to or toward). The subject of the behavioral clause transfers an item from himself to another person or locus in the environment. The proferring (extension) of an item is also coded here, even though the person to whom it has been offered does not take the item. This type of response will often appear as the object of a request, as when one child asks another for a toy he is playing with, or when a teacher asks a child to put a toy on the shelf or give it to her. It is not used when one child takes a toy away from another child without the assent of the first child (coded as interference, 35). This predicate takes the indirect object, and the fourth digit must tell the person or place to which the item is transferred.

02551	Kevin (CF) pushes the pair of scissors toward Pete saying, "Here's one."
22569 00129	John watches the teacher distributing paper.
07021-22509	Billy says, "I want a puzzle," to Mrs. Arno.
27401 22509	Miss Nevill asks, "Would you like a pail and shovel?"
02510	Laura puts the book down on the edge of the table and it falls off.
02559	Donald puts a fireman's hat on Tony.
but	
26109	Mrs. Blackman puts a hat on Mazie prior to outdoor play period.

25-29 Manual Activities. This area refers to actions of the subject upon some type of item (toys, paints or crayons, clothes, etc.) or article. Usually this will involve fine rather than gross motor activities (except in transports, 28), but in all cases the flavor of the action appears to be conveyed by the interaction of the subject with some article rather by the motor activity itself. If the latter appears paramount, then the behavior is coded in the area of body activities (50-59). In general the category refers to manipulation of items with the hand or hands, as implied in the category label, but occasionally the manipulation will be carried out with the foot (as when a seated child uses his foot to draw a block into position to be grasped). When the manipulations involve intra-individual behavior only, the predicate (26 or 27) takes a direct object and the fourth digit is always the number 4 (object). When the manipulations involve any sort of interpersonal transfer of objects (25, 26 meaning take, 28, and 29) then the verb takes an indirect object. In these cases the fourth digit will identify the person or environmental area to whom or from whom the article is transferred.

26 Takes (from) or handles item. This predicate has two distinguishable meanings. In the first, the subject of the behavioral clause takes an item from another person (only if it has been profferred or in no way defended) or from a place in the environment. In this meaning the person or place from which the item is taken will be identified in the fourth digit; i.e., the "takes from" version needs an indirect rather than a direct object. The second meaning refers to simple grasping and holding manipulations that require a minimum of complex visual-motor coordinations. With this meaning, the verb takes a direct object and it is always 4 (item). Included in this category would be such things as touching or holding a toy, transferring an object from one hand to another, pushing toys randomly, etc. It will be noted that this category, with a toy or other manipulable item, is virtually identical to predicate 21 involving food. Vigorous handling of items is coded as 26 with a 3 in the fifth digit (e.g., pounding, hammering randomly). Occasionally there will be some confusion as to whether a response is primarily giving an item to or taking an item from or both. There is no need to code both parts of an object transfer from one person to another, unless the exchange is unusually protracted. As a rule only the more active part of the exchange will be coded--i.e., if it appears more giving than taking, code accordingly.

02649	Jane pats down the sand.
02619	Len picks up a pin from the table.
27101-22609	Miss Heller asks, "May I have (take) it, please?"
22609	She takes it from his hand.
02649	Sally fingers her suspenders.
21701	Mother says, "Suspenders. They hold your pants up."
02647	Sally feels them.

26 Takes (from) or handles item (cont'd).

05699	Jeffrey walks away.
02649	Runs hand along table edge as he walks by.
02622	Norman regards Miss Baum's fingers and plays with them.
02610	Melanie reaches for the marking pencil.
27301-02649	Mrs. White says, "Don't touch."
02643	Carl bangs on the playdough with the rolling pin.

27 Manipulates item. This category refers to more complex and difficult item manipulations such as building with blocks, drawing (non-representational) or painting, stringing beads, pushing small toys along the floor in a purposive manner, washing paint brushes, turning faucets on or off, etc. The predicate takes a direct object, which is always 6. The decision between 26 and 27 does not rest on the quality of the item manipulation. For example, if a child tries to string beads but cannot get the bead beyond the tip, this is not coded as 26. Rather, it is coded as 27 with a 0 (ineptly) in the fifth digit. Intensive manipulations (such as pounding down the pegs in a peg board) will be coded as 27 with a 3 in the fifth digit.

02749	Andy picks up a shovel full of sand and puts it in the dump truck. (Note: this is coded as item manipulation rather than item transfer as this type of movement of sand from place to place is one of the few ways in which dry sand can be manipulated. No change in locale is included and to call such activity item transfer would be misleading.)
02740	He closes the gate of the dump truck but it falls open.
02749-05699	Roxanne puts on the high heel shoes and walks about in them.
02749-05698	Sam pulls the little wooden car about the play room.
02749	Ken smears paste on his paper, picks up the picture and places it on the paper (all taking less than five seconds).

28 Transports item (to). This category refers to moving an article from one place to another in the environment, not merely transferring it from one person to another person or place in the immediate locale. Decisions between 25 and 28 hinge entirely on whether locomotion is involved, in which case the correct verb is 28. Ordinarily articles are transported by being carried in the hands or arms. However, if the article being transported is large and heavy and requires pushing or pulling in order to be moved from one locale to another, this is still coded as item transfer rather than as a large muscle activity. The article transported must be a physical object; transporting a child is coded under 55 below.

02819	Larry pushes his chair along the floor to the table.
27061 62819	Mrs. Tailor suggests to the boys, "Let's put them on the table in the other room."
22819	Mrs. Shaftey brings in the cots.
27001 02829 22509	Mrs. Drum asks Sarah "Can you take this box of diapers to Mrs. Green for me?" handing her the box.

29 *Throws or rolls item (to)*. This category refers to purposive, usually interactive, throwing or rolling of appropriate types of play materials. Thus the most characteristic behaviors coded here will be ball play, scooting a truck back and forth from one child to another, throwing a bean bag at a target, etc. The disorganized throwing of food or play materials is not coded here; rather these behaviors would be identified as either 24 or 64.

02929	Betsy throws the ball to her mother
22909	Her mother kicks it back to Betsy.
02999	Doug throws the ball,
46099-00149	Watches it bounce.

30-39 Negative Reinforcement. This area encompasses a number of behaviors which can perhaps best be summarized as disrupting the emitted behavior of another person or group of persons. Frequently the individual predicates are interactive, in which case their non-reinforcing property refers to their failure to support the on-going behavior of another person (as in interference, resistance, assault, etc.). However, they may also refer to essentially undirected or undifferentiated reactions of distress (signs of fear or displeasure). The behavioral disruption may come from the environment as well as from other persons, as when a child tries to locomote toward a particular locale but is blocked by a fastened gate (environmental interference). Coding decisions are made in terms of what actually transpires, rather than in terms of apparent intent. E.g., if one child bites another, this is coded as physical assault (38) regardless of whether the first child "really meant to hurt" the second child. Although the predicates from 30 to 38 are already roughly arranged in order of intensity, it is still possible to qualify them further by the use of the number 3 in the fifth digit. Thus a spoken "No" in 30 ends with a 1; a yelled or shouted "No" ends with a 3. Similarly, a whining 31 or 32 ends with 1; a crying 31 or 32 should be indentified with 3 in the fifth digit.

30 Withholds sanction (from). The subject protests, denies, disagrees with, challenges a statement made to him, or refuses to carry out a requested act. Thus, in all these behaviors, he is withholding sanction of the behavioral hypothesis with which another person has approached him. This must occur in response to an encounter with another person, and it is primarily a verbal category.

27001	Miss Vern says to George, "Right now we are going to
06109	take off our coats."
03021-03228	George says "No" with a whining voice.

03051	Charlene says to David, "You can't come over to my house."
52619	David is about to pick up a truck.
23051	Mrs. Lane says, "No, these are the ones we took
21751	out for Edward (CF)."

27001-05619	Mrs. Fisher says, "We are ready to have snack now."
	(After having asked him to come inside)
03021	Mark replies, "I don't want to have snack now."

07021-22509	Ellen says, "I want more."
23001	Miss Gold says, "I think you have enough."

27401-26109	Miss Cross says, "Let me tie your shoe."
03029	Katie shakes her head no.
21601	Miss Cross asks, "Is this your shoe?"
01529	Katie shakes her head no.

31 Shows discomfort. By his behavior or verbalizations, the subject gives evidence of experiencing fatigue, tension, fear or pain. If the manifestation is extreme, this will be indicated with a 3 in the fifth digit. This will generally but not always appear as the second half of a double code. For example, in the presence of a fear-provoking stimulus, a child might run and bury his head in the lap of a favorite teacher with a look of fear on his face (00222-03298). No assumption is made here that one can always decide between signs of personal distress (31) and evidence of displeasure (32); however, the coding is done with full awareness of the nature of the stimulus to which the individual is reacting. Thus if a child cries after receiving an injection this would be coded as evidence of pain (03193) whereas the crying of a child who has just had a toy taken away will be coded as expressing displeasure intently (03293). Whenever overt crying occurs, the response will be coded with 3 in the fifth digit. As a rule this predicate does not take an object.

03198	Georgie yawns, looks very red-eyed and tired
03199	Alice, who has a very bad cold, appears uncomfortable.
22519	Mrs. Boyd puts the puppy dog on the floor.
03199	Charles draws back fearfully.
02649	Jean smears paste.
00109	Looks at her hand.
00149	Looks down at dress (thinking about wiping her hands on it)
00129	Looks at observer.
03199	Looks doubtful.

32 Expresses displeasure (to). The subject emits an expression of unhappiness or some other indication of negative affect. All culturally accepted gestural and vocal patterns are so coded. The response may have an object (as a child looks at the observer and frowns), or it may be entirely non-specific (as when a child walks about the room, looking at no one in particular, with a frown on his face). It will frequently appear as the second half of a double code. Whenever the response is accompanied by vocal crying, a 3 in the fifth digit is used. There may be some confusion between 31 and 32, in which case an investigator could easily abandon one or the other and be content with a single code for overt expressions of displeasure (the more parsimonious term).

05399-03291	Beverly is wiggling and whining.
03291	Jack is standing there fussing.
03299-03293	Raymond pouts and then begins to cry.
05199-03298	Tammy sits at table looking angry.

33 Criticizes or derogates. This predicate refers to patterns of contact that involve critical, derogatory, accusatory, belligerent, or simply thoughtless verbalizations. The response must be accompanied by a verbalization. Although it will usually involve an interpersonal response, it may be directed against the self or against a physical object in the environment. Such responses emitted by children occasionally have a difficult-to-define quality about them; the same behaviors emitted by adults would be easily interpreted within any social system. For example, a child might say "I'm not going to play with you any more" but make no move to terminate the contact or follow through in any way. Or they might serve as socially unacceptable ways of establishing contact, as when a child walks up to a visitor to the classroom and comments, "You got a ugly pocketbook." In short, these are social ploys not likely to win friends and influence people (except negatively). If emitted with great vehemence, they would be coded with 3 in the fifth digit. If accompanied by clear evidence of accompanying affect (either negative or positive), then this either is indicated as the second half of the code or the response becomes one of an expression of hostility (34).

23301	Mrs. Tanner says, upon surveying spilled trays, "Joan is going to have to learn not to turn everything upside down."
53802-53301	Georgie hits Stanley (CF) and says, "Stupid!"
03321	Charlene says to Mrs. Honey, "You got a ugly pocketbook."

34 Expresses hostility. This predicate represents merely a high intensity level of the preceding one. In practice it has been used very little, having been added to the list of negative behavior to parallel the positive behaviors contained in the next decile. It refers to verbal hostility (must have a 1 in the fifth digit) and is limited to extreme statements of dislike and antagonism--"I hate you"; "I wish you were dead." Other components of the assortment of behaviors characteristically referred to as hostile are spelled out in greater detail in the next four predicates.

35 **Interferes or restricts.** The subject physically interferes with the actions of another person. This may take the form of restriction of movements, taking away a toy that was being used, interruption of an activity in which a child was engaged, etc. It does not refer to indirect action taken by one person which will lead to interference with another--i.e., as when a child tattles on another child to the teacher in the apparent hope that the teacher will interfere with the other child. Also not included in this category is verbal interference in which a child is interrupted and told to do something quite specific--"Put that down"; "Stop that," etc. Such behaviors are coded as control statements (see 70-74 below). However, if a verbal statement interrupts but does not specify any desired action (as when an adult accusingly calls a child's name) this is coded as interference with a verbalization.

06499	Jonathan is splashing in the puddle.
23501	Mrs. Wine says, "Jonathan!"
05619	He walks away from the puddle.
53502	Paul reaches over to pull Jimmy's (CF) thumb out of his mouth.
33502	Betty climbs into Mrs. Saul's lap and
30223	crowds Mary (CF) physically as she does so.
23502	Mrs. Arnold has a restraining arm around Clara,
24408	almost a hug, but Clara cannot get away.
73872	Two boys are fighting.
23572	Mrs. Peter separates them.
03559	Davey grabs Norman's truck.
83301	Mr. Low says to Davey, "You've got some."

36 Resists or rejects. This is the responsive version of interference and covers such responses as holding back when held or led by an adult, wriggling or fighting when an adult attempts to change a diaper, pushing away a proffered toy, turning head away when food is offered, etc. It is not an active kind of interference but one which occurs after some perceived interference from another person. At the same time, it connotes a specific pattern of response and not simply any type of non-compliant behavior. Each coded act should refer to the immediately preceding code in which some other person is subject of the clause. It is sometimes difficult to determine exactly what or who is being resisted. E.g., when an adult offers food and the child turns his head away, is he resisting the food or the adult? The coding rule is to interpret this as resistance to the person.

02649 Laurie (CF) puts her hand on Mike's chair.
53602 Mike pushes her hand off the chair.

03552 Georgie (CF) tries to push Tommy away from the
53602 window. Tommy pushes back and doesn't move away.

37 **Threatens or frightens.** The subject gesturally or verbally threatens another person with censure ("I'm going to tell on you"), loss of item of play material ("I'm going to take your bike"), physical assault ("I'm going to kick you in the face"), loss of privileges ("you can't play with us any more"), etc. The response often implies a bargain or a contingency statement: i.e., the subject will carry out some sort of undersirable behavior unless or if the other person does something. In those instances it is a type of behavioral control and will be double coded as a command. It also covers teacher behaviors that involve threat of action even though they may carry an informational component. If the latter is strong ("It hurts Jimmy when you bite him; if you do it again...") then all components of the response would be coded. If a child threatens as part of play (e.g., monster play) and elaborates his threat in any creative way, then 19 is double coded.

53701	"I'm going to kick you!" Steve says to Dave (CF).
03751 07158-52609	"I'm going to kick you if you don't give me that bike," Steve (CF) says to Dave.
03752	Roberta puts mouth on Billy's hand as if to bite.
03759	Steve is kneeling on his own chair in an aggressive manner toward Murray.
50309-53101	Murray gets up and is looking away from Steve (CF) whining.
03731 01938-05633	Michael pretends to be a monster, makes noises, faces and chases Peggy.

38 Assaults. This predicate refers to physical action and includes any assault by one person upon the body of another person, the self, or toward an item of equipment. No inference is made about whether the assault is intentional, done in anger, or adventitiously (as when a baby bites a portion of the anatomy of another who happens to be in proximity to his open mouth). Hitting, slapping, punching, kicking, spitting, pushing away, knocking off balance, twisting of body parts, etc. are included here. The consequences of inept body activities (such as a toddler lurching forward and stepping on another baby on the floor as he goes, or a child's swinging of a pull toy and accidentally hitting another person) are not included here. These would be coded as inept activities (05690 or 02740) and the response of the affected person registered in an appropriate subsequent code. If an assault occurs as part of behavioral disorganization (64 or 65) this is injected into the coding sequence at the proper point but does not substitute for the disorganization code.

03843	Dickie kicks a chair, kicks another chair and then turns a chair over, all in rapid succession.
53809	Sam spits derisively "Puh" at Tom (CF).
03859	Jerry throws the block at Mark.
03849	Tony steps on the balloon and breaks it.

40-49 Positive Reinforcement. This area covers an array of behaviors (each essentially a mirror image of its counterpart in the preceding decile) which might be defined as supporting the on-going behavior of another person or as indicating a state of satisfaction or pleasure reflecting the subject's feelings toward himself. These responses cover the traditional range of behaviors which teachers and parents are urged to use with their children as techniques for reinforcing desired patterns of behavior. The common denominator of all the responses included in this decile is nuturance.

40 Permits or sanctions. The subject authorizes some proposed type of behavior or accepts an offer made to him. The predicate indicates that permission has been granted for some type of action to be carried out with or for the subject. This category is distinguished from its counterpart in the information decile (confirms, 10) in terms of its connotations for action. Questions leading to a 40 response are coded in the control techniques categories (70-79) rather than being coded as inquiries (16) or solicitude (41). Thus if a teacher asks "Are these your shoes, John?" and John replies "Yes," the codes for the two segments of behavior are 21601 and 01021. If the teacher asks "May I tie your shoe now, John?" and John nods "Yes", the codes are 27401-26109 and 04029. In the latter question the teacher is exployring John's feelings and wishes and offers to act in accordance with his stated desires. In his response he has in effect sanctioned her offer. An answer of "No" to the same question would have been coded as 03021.

24701	Mrs. Gilbert says, "We'll tell you when snack is ready."
04021	Tommy says, "O.K."
24701-27001	Miss North says, "I'll get some more, O.K.?"
04029	
27401	"Do you want to help me get out the play dough?" asks Mrs. North.
04529	
04021	Ben says, "Yes."
53509	George grabs Mark's (CF) truck.
04059	Mark gives it up without protest.

41 Expresses solicitude. This predicate involves an expression of concern for the well-being or comfort or contentment of another person. If often appears as a prelude to some type of nuturant behavior or as an interjected remark during nurturant behavior that does not seem to be pleasing the recipient. Such a response may attempt to identify or respond to a cause for discontent, lack of response, or active resistance. It also covers comforting a child who has been hurt ("There, there, you're going to be all right"). The response to a solicitous inquiry is properly coded as confirmation (10) or disconfirmation (15).

The behavioral counterpart of solicitude is an offer (74) for which the responses will be sanction (40) or withholding of sanction (30).

05309	Jackie rubs her eye.
24101	Mrs. Parsons quickly turns to her and asks, "What happened?"

22009	Miss Vaughn offers Norman another spoonful of food.
03629-03223	Norman turns his head away and cries.
24101	Miss Vaughn says, "Norman, what's wrong, honey? Are you so tired?"
03223	He cries and puts his hand
03629	up in front of his mouth.
23502	Miss Vaughn pushes hand down and tries to put spoonful into
22009	his mouth.
03629	Norman refuses.
24101-22509	"Do you want to feed yourself?" she asks and hands him cup.

42 **Shows pleasure**. This category includes all the culturally accepted signs of positive affect expression--smiles, laughs, coos, happy gurgles, remarks indicative of pleasure, sighs or gasps of pleasure, looks which express animation and excitement or joy, gestures of satisfaction and comfort. It is basically a sympolic expression; i.e., if it is to perform a reinforcement function both the sender and the receiver must accept and understand the meaning of the expression. If the behavior appears to be more than an expression of pleasure and instead to be an act of affection bestowed upon another person, then it will be coded as 44 rather than 42. Usually it will be nonverbal, and frequently it will appear as the second half of a double code. It may or may not have an object (i.e., child may smile at a particular teacher or friend or may simply smile while working a puzzle). A laugh is coded with a 3 in the fifth digit.

04299	Shirley seems very contented in Miss Smith's arms.
05301 04298	Joe claps hands gleefully.

43. Approves, encourages. This type of response is one which basically enhances the self-esteem of the person (or animal or personalized toy) to whom it is directed. It must be verbal, and it must have an object. It includes statements of praise ("What a nice boy you are to put all the toys away"), approval ("I like little girls who remember to wash their hands before lunch"), encouragement ("You can do it, Mark"), or gratitude ("Thank you, Molly"). It must be verbal and will usually be directed to another person; however, it may also be self-directed ("Look at what I did, Miss Meyer). In the last example, the self-enhancement would be accompanied by a double code of a request for attention from the adult. (Note: with remarks such as "Look at what I did," supplementary information from the observer is essential. The child could either be praising himself or saying in effect "I goofed." Qualitative descriptive comments by the observer are not only permitted but essential.)

24301 "That's the boy," encourages Mrs. Glass.
24301 "How pretty you look today, Madeleine," beams
24208 Mrs. Good.

44 Expresses affection. This is perhaps a slightly more intense indication of approval or of solicitude. It involves either physical or verbal indications of love and affection. If verbal, some such verb as "love" must be used. Physical manifestations include kisses, hugs, gentle squeezing, affectionate pats on the cheek, etc. However, it does not include all the casual touches a caretaking adult might give a child in the course of routine activities; these are coded as 53 (with a direct object) unless clear evidence of accompanying affect is given. In the event of conflict between 2 (physical) and 1 (verbal) in the fifth digit, code 1; virtually all such encounters will include a physical component, and it appears more important to know if the act is accompanied by a verbal statement of affection.

00222 04428	Herbie runs to his mommy and hugs her.

45 **Facilitates** This predicate refers to the provision of physical help to another person as that person is himself or herself involved in carrying out an activity. Thus it is to be differentiated from helpful and nurturant acts carried out by one person completely for or in behalf of another person (these are largely coded as caretaking, 61, or possibly feeding, 20, in this system). In this sense the category refers less to any specific type of behavior than it does to the interaction between two persons in the execution of an activity, and the predicate might be used to cover involvement in such diverse acts as working a puzzle (27), getting a recalcitrant arm into a jacket (61), holding a piece of art paper as a child paints (27), stabilizing a slant board as a child walks up it (57), holding the hand of an infant who is trying to walk but having difficulty staying on his feet (56 with 0 in fifth digit), etc.

24562 65199	Miss Case helps the children get seated
02740 24509	Jenny's mother helps her put a puzzle piece in correctly.

46 Excuses. This predicate covers responses which are to some extent the negative side of 43 above (approves, encourages). That is, while not openly supportive of another person, they offer a rationalization or defense of the other person's less than optimal behavior. They appear still to belong in the general reinforcement category in that they reinforce behavior of which the other person is potentially capable. Such responses often occur in the form of an excuse for the behavior of one person offered to still another person, as, for example, when a teacher explains to David (other child) that James (central figure) did not really mean to knock him down with his tricycle. In such instances the giving of information to other child is coded as the primary component of the response, with defense of central figure indicated as the second half of a double code (21751-24600). If essentially the same response had been made purely in the form of a remark to the central figure ("You didn't mean to knock David down, did you") only the 46 would have been coded (24601).

24601	"I'm sure you could do that if you weren't so tired," says June's mother to her.
24601	"It's all right. It was just an accident," says Miss Little to June.

47 Bargains, promises. This response indicates that some kind of desired reinforcement is to be made contingent upon some particular type of response to be made by another person. The contingent response may actually refer to cessation of an on-going response ("You may have it if you will stop crying"), to withholding or delaying a response ("You may go outside in a few minutes"), or to the carrying out of some completely different intervening response ("You may have the trucks after you have picked up all the puzzle pieces"). Not included in this category are responses which do not make eventual reinforcement contingent upon the behavior of the interactee but which merely explain the necessity for delay. Such responses will generally be coded as giving information ("We may have our lunch as soon as the first group leaves the dining room"). In those instances in which the behavioral contingency is clearly stated, one component of the bargain involves a structurizing request (see 70 below). In that case, the nature of the response called for in the bargain should be identified as a structurizing request as the second half of the code. Thus in the above example, "You may have the trucks after you have picked up all the puzzle pieces," the coding would be 24701-27008-06119. Not infrequently it will be somewhat difficult to decide whether a promist or a threat has been issued; the insertion of two negatives into a statement of promise converts the response into a threat--e.g., "If you will stop crying you may go outside" as opposed to "If you don't stop crying you can't go outside." While the latter is undoubtedly not the same as a threat of physical assault, it is nonetheless a threat of deprivation of privilege and is qualitatively entirely different from the positive (promising) version of the same statement. The rule here is to code according to the language of the response.

24701	"We'll read that one later," says Mrs. Field.
24701 27008 06109	Mrs. Best says, "You need to put an apron on and then you can play with the play dough."

47 (In this coding the promise is coded first in order to permit the control statement to show a response.)

07021 "Just a minute," Peter says to his mother.
25199

04721 "I'll do it in just a minute," says Peter to his mother.

48 Protects, defends. The subject of the behavioral clause takes some anticipatory action to defend the person or rights of an individual or item. This may take the form of actually warding off blows, of defending the property rights of one child against impending incursions of another, of protecting a toy or other possession from attempts of another person to take it, etc. If the protection were ineffective or too late, then defensive maneuvers might become resistance. Protection of one person often occurs in the form of interference with another and the protection is only inferred. For example, a teacher might see one child (the central figure) trying to take a tricycle away from another child and intervene. Here her actual emitted behavior is not protection of the second child but interference with the first; in such instances the protection will be reported as the second half of a double code and the delineation of the object of each part of the statement will be crucial to correct interpretation of the act (23509-24858).

53509	Tony reaches over to get some of the little paper shapes.
04849	Brad (CF) defends his pile.
03852	Jeffrey hits Alan.
50222	Alan runs behind Miss Custer and holds onto
54808	her skirt.

50-59 Body Activities. Behaviors in this group refer to actions in which some type or quality of body activity is the primary feature of the response or else in which the continuation or successful execution of any type of response requires a refinement of some specifiable action. In the predicates within this area toys or play equipment may occasionally be involved (as when a child is riding a tricycle or climbing on a jungle gym), but in these cases the item of equipment appears ancillary to the movement which it facilitates rather than primary (as in manual activities, 25-29, in which the body movement appears to be carried out merely as a means of enabling the item to function in a desired manner).

50 Increases or accelerates. This category is used in a very limited way to refer to a clear acceleration of the speed or tempo at which a response is emitted. It is not a "pure" category in that it refers to a change of tempo in other types of body activities in which a person may be engaged. It is used in a very restricted form to serve one very important function. That is, one of the most common injunctions which little children hear from the adults around them is the not too understanding plea that the child adjust his tempo to that of the adults--"Hurry up now and finish your work;" "Let's hurry and get our jackets on so we can go outside." The predicate was introduced specifically and exclusively to cover this type of request. The category is not invoked, perhaps somewhat illogically, to cover variations in tempo in continuing activities, as when a child is walking across the playground and begins to run, or when a child is riding his tricycle slowly and suddenly gives out with a burst of speed. Both of these variations are handled by the use of the number 3 (intensity) in the fifth digit.

21701 Mrs. Sterling says, "Hurry and finish your breakfast, Alice, so
27108 you're not late to school."
05099
05099 Alice starts eating faster.

27301 Miss O'Brien says, "Don't go so fast, Lawrence."
05099

51 Decreases or retards activity. This category refers to an inhibition, diminution, or cessation of body activities. It is not used at the termination of every single activity carried out by the child; rather whenever a new code appears, it is assumed that the action symbolized by the preceding one has terminated. This predicate is used to cover such events as the sudden sitting down to rest of a child who has been running or playing, the deliberate sitting down to prepare for a story, lying down on a cot, etc. This code will frequently appear as the object of an adult's request for restraint of body activities on the part of a child either as an end in itself or as preparation for some other type of activity. It does not take an object, either direct or indirect. If an observed person is asleep, this is coded as 51 with a 3 in the fifth digit. This category is also used to describe the continuation of a pause in activities which cannot be coded in any other way, i.e., patient waiting. When a decrement in volume of sound occurs, it is specified by a 1 in the fifth digit. For example, Jonathan sees the baby sleeping and immediately quiets his voice to a whisper (05191) .

05199	Danny sits in chair, waits for story.
00139	Looks at Mary sitting next to him.
05197	Sits quietly and waits.
05199	Johnny is standing there beside the toy shelf.
27101	Mrs. Morris says, "Tommy, be quiet."
05191	
27301	Mrs. Bloom says, "Don't go so fast."
05099	
05199	Roberta slows down.
27101	Miss Cantor says, "Hurry up. Jim's waiting."
05099	
05199	Elaine continues to dawdle putting on her rubbers.

52 **Perioralizes.** This awkward neologism (necessitated by the decision to cast all predicates in verb form) refers to any body activity involving the perioral region that does not involve the intake of food. It includes thumb-sucking, blanket-chewing, mouthing of toys or utensils, gum-chewing, nail-biting, tongue sucking or lolling, and smoking (the last-named example obviously expected only as an adult response).

05199 Patrick sits quietly,
05209 Sucks his thumb.

05249 Elizabeth tastes some paste.
02649 Puts paste on table, smears it around.
05247 Still has some in mouth, doesn't look too pleased
03298 with taste.

05219 He is standing by the door, mouthing the doorknob.

02749 Patricia has a straw and starts blowing bubbles in
05248 the soapy water.

53 Acts in situ. This category refers to essentially all non-locomotory body activities--i.e., all except those involved in manipulating objects, in non-nutritive oral activities, locomotion, or large muscle play activities. It includes standing up, clapping, bending down, bouncing, nose picking, rubbing the eyes, scratching, manipulation of the genitals, etc. It does not include extending the arms to be picked up (coded as structurizing request, 70, emitted non-verbally) or waving in greeting (coded as establishing contact, 02, non-verbally). It is recognized that there may be some subjectivity in interpreting the meaning of these pre-verbal gestural communications, however, the APPROACH interpretation should, as much as possible, parallel the interpretation of the adults who interact with a child. Usually this verb does not take an object (e.g., bends down, 05399); however, if the body activity acts upon the subject in a specific way, then this is indicated in the fourth digit (e.g., child scratches himself, 05309).

05391	Jack lifts his arms and stretches, says "Hm-hm."
03199	Mickey yawns, looks tired.
05313	Betsy bangs her hand on the table.
05309	Janie scratches her arm.

54 Adjusts or accommodates. This was the last verb added to the APPROACH language, and it is a difficult one to define. It refers to any action taken by the subject to refine a body activity or manual activity in order to produce a more desired result. It covers such diverse responses as twisting the body around to be able to see the pictures in a book being read by the teacher, moving a chair closer to a work table, snuggling into a lap in order to be more comfortable, replacing a hat that is falling off one's head, maneuvering a truck through a narrow passage, disengaging a toy that is trapped under a book shelf, etc. Thus again it is a qualitative description of the way in which certain body activities are carried out rather than a sharply delimited category in and of itself. In order for this code to be used (rather than 26, 53, or 57) the record must clearly indicate the function which is served by the movement in question, i.e., "The teacher adjusted her earring which was slipping off." Very often a 54 will occur after a statement that had a zero (ineptitude) in the fifth digit.

05409	Miriam leans way over to look at the book.
02610 05449	Marge picks up a chair; her beads get caught on it; she disentagles her beads.
02510 05449	Jessica places the cup on the saucer ineptly; it falls over. She rights the cup.

55 **Provides kinesthetic stimulation.** This category involves any sort of body manipulation of or for the child that involves primarily stimulation of the kinesthetic receptors. It includes such activities as swinging, pushing someone in a stroller, pulling someone in a wagon, giving someone a ride on a tricycle, carrying or rocking a child, etc. Thus the category refers to passive movement, with one person providing the motive power for the movement of another. In these instances the recipient of the kinesthetic stimulation will appear as the object of the behavioral clause, not as the subject. Some types of kinesthetic stimulation included may indeed be self-provided, in which case they will be coded under 57 below or 53 above. For example, if a child is pushed in a swing by an adult this is coded as 25509 (2 is not used in the fifth digit even if the adult happens to push against the body of the child rather than the swing itself in that the interpersonal physical contact is brief and intermittent rather than sustained throughout the response); if a child swings himself it is coded as 05719. If a person rocks him in a rocker, this is coded as 2550 (2,1,7, etc.).

25509	Miss Grey pushes Melody in the swing.
20309	Miss Grey then leaves to push Linda.
15509	Melody continues to swing.

25509-37021	Mrs. Casey see-saws Amy (CF)
65719-	Laurie says, "Me, too."
24539 --00179	Amy watches as Mrs. Casey helps her on.
65719	The girls see-saw together.

25502	Mrs. Carpenter carries Faith as she tidies up
26118	the room. Mrs. Wright says,
27421	"Here, I'll hold her." Mrs. Carpenter gives Faith to
20203	Mrs. Wright, who holds her, rocking in the rocking
20303-20303	chair.
25502	

56 Locomotes toward. This predicate refers to all categories of movement in space in which the child is a free agent and somehow propels himself without vehicular support--i.e., crawling, walking, skipping, etc. The actions should serve the purpose of getting the subject from one place to another. Activities such as hopping or jumping that move the child from one locale to another one near-by within the restrictions of some type of game (such as hop scotch) are coded as large muscle activities (57) rather than locomotion. Likewise, riding a tricycle, even though it may often move a child from one locale to another in a relatively short time, is coded as an LMA (large muscle activity) rather than as locomotion. Although one cannot be certain, it is probably safe to guess that a child rides a tricycle for the sake of riding rather than for the sake of getting some place. This verb takes an indirect rather than a direct object; therefore, the fourth digit should indicate toward what or whom the subject locomoted. In the event the locomotions appear to be somewhat aimless and undirected, this is coded as 05699; if the locomotion appears to be purposive but the observer cannot determine exactly to what or whom the subject is locomoting, then the code 05619 is used (indicating "locomotion to some spot in the environment"). Running is identified by 56 with a 3 in the fifth digit.

05643	Lisa runs back to her chair.
06649 05618	Jerry walks about the room pulling the quacking duck pull toy.
07061 65619	Miss Kennedy says to the group, "Now, we have to go back in the other room."
03293 05619	Eddie cries as he scoots himself along the floor in a seated position.
27101-05629	Miss Lowry says, "Come here."

57 *Engages in large muscle activities LMA's).* This predicate refers to large muscle activities which in general will utilize play equipment or stable items of furniture in the environment. Typical activities would include riding a tricycle, climbing the jungle gym, climbing play steps, going down or up a slide, participating in gymnastic activities, scooting on a dolly, rolling in a barrel, pushing a child on the tricycle (the child being pushed will be coded as the recipient of kinesthetic stimulation, 55), playing in a sprinkler, etc. Although all of these activities obviously involve kinesthetic stimulation, the child himself provides the propellent force. The object in these clauses will vary as a function of the type of activity and will take the grammatical form of "LMA's with ________." Thus if with no equipment at all (jumping, hopping, etc.) the statement will read 05799; if with stable equipment like the jungle gym or steps it will read 05719; if with a tricycle or other wheel toy it will read 05749.

25749	Miss Case is rolling a tire as a hoop.
75719	The children are going off the slide.
05199	Phyllis (CF) is standing waiting her turn.
55719	Danny goes down.
05719	Now it is Phyllis' turn and she climbs up,
05717	down.
05719	Marilyn pumps herself in the swing.
27001-05749	"Can you rock?" asks Miss Lester.
05749	Larry rocks himself in the rocking chair.

58 *Marches, dances, or rhythmicizes.* This predicate refers primarily to the type of rhythmic activity carried out in response to music. However, it also describes either organized ("Would you like to march to the gym this morning?") or spontaneous marching, a type of motor activity which appears to be especially characteristic of little boys as dancing is of little girls in the nursery school. If the marching is done as part of a rhythm band activity, in which the children are also playing some instrument, then the primary response will be coded as 56, makes music, with the marching appearing as the second half of a double code. In such situations one is being quite speculative to suggest that making music is the primary response and marching the secondary one. This is an arbitrary rule developed to facilitate reliability of coding and does not imply any judgment as to which component of the compound response is actually more basic.

76671-05899	Charlie moves his foot rhythmically as the rest of the group sings "Frere Jacques."
35899 00139	Charlie (CF) watches Linda who is clapping in time with the music.

59 Voids or excretes. This predicate is quite self-explanatory, but a few notes about how it is to be used should be helpful. It includes not only the consummatory act but also all premonitory responses such as sitting on a potty seat, that are involved in what is generally referred to as "toileting behavior." When one is observing infants and young children, it is frequently difficult to determine exactly when voiding occurs. Although excretion is somewhat easier to observe, even that can occur without any awareness on the part of the caretaking adults. Therefore it is to be considered appropriate to use this predicate whenever it is obvious that the response has occurred--e.g., as when a nurse removes the diaper from an infant and finds it wet or soiled, or when a toddler gets up from a potty chair and reveals evidence that he has voided. Quite obviously in a day care environment or in the home, this predicate will be a frequent topic of adult inquiries--"Do you need to go to the potty?" or "Would you like to sit on the potty?" With some of those that have been observed in day care settings, it is difficult to decide whether the adult is being solicitous or making a structurizing request. Unless the suggestive evidence is strongly contradictory (as when a nurturant adult goes through a long list of items with a crying child, including the possible hypothesis "Do you need to go to the potty?"), all versions of this type of inquiry are coded as structurizing requests. Frequently an observed child will sit for a long period on a toilet or potty seat prior to voiding or excreting. In these instances the sitting is coded as 59 rather than 51, and the final consummatory act is identified by the use of a 62 (consummates activity). In the event the pre-voiding behavior does not actually lead to the consummatory act, then the termination of the sequence is announced by the use of a 63, meaning that the consummation involved failure rather than success. Special coding rules describing the use of the codes 62 and 63 will be described below.

(59)	26102	Miss Dixon undresses him.
	05999-26107	She changes him.
	27001	Miss Carter asks, "Do you have to go to the
	05999	bathroom" Do you have to make bubbles?"
	03021	Helen says, "No."
	05999	Miss Horner wrinkles her nose and says,
	23301	"Jackie, you've done it again."

60-69 Miscellaneous. This area is aptly described by its label: a series of unconnected miscellaneous items that either did not fit any of the other areas or else that logically belonged in one but could not be squeezed into the number of available numerical codes.

60 Acts or occurs. This predicate epitomizes the miscellaneous category. If a person is the subject of the sentence, then the correct meaning of the verb is "acts." The verb refers to essentially any type of behavior which cannot fit into one of the other categories. If the subject of the behavioral clause is not a person--i.e., is an item of equipment or part of the environment--then the verb will take on the meaning of "occurs."

16091	Jeffrey hears a truck,
05613	runs to the window and
00119	looks out.
02640	Terry steps on the rubber toy. He looks down
46091-00149	as it squeaks
46091	The rolling pin rolls by, drops to floor.
03199	Larry looks startled.

61 Caretakes. This predicate was at one time classified with the other responses in the positive reinforcement category in that, to some extent, it epitomized nurturance, particularly when directed from adult to child. However, even the most nurturant of adult behavior is not always thusly interpreted by the child; therefore, the response was refined somewhat and pulled out of the positive reinforcement category. It covers the many activities carried out during a day that serve the function of keeping the child, the environment, the equipment, or the adult clean and orderly. It includes dressing and undressing, diapering, toileting, helping to prepare children for naps, washing, straightening and organizing furniture, sweeping, etc. The verb takes a direct object.

06119	Miss Jones (CF) is hanging up his coat.
06119	Helen wipes up the crumbs on the table.
06149	Miss Jasper asks, "Would you like to wash the glass?"
06109	Grace brushes the sand off her fingers.
35999	Another teacher is diapering a baby girl and saying
26131	that the diaper is wet.
00179	Ken regards this.
06100	Brian wipes his fingers full of food on his shirt.
25502	Miss James walks over with Nancy (CF) in her arms
25648	to get a tissue;
26102	wipes Nancy's hands.
26132	Miss James blows Chareen's nose.
00179	Nancy regards this from her arms.

62 Consummates activity. This response has two meanings, the first of which is less precise than most of the other categories and is somewhat difficult to define. It is a molar verb and refers less to an actual response than to a culmination of a series of related (though not necessarily identical) activities resulting either in success or consummation. It is included in the system because of the powerful reinforcing role assumed for consummatory activities. It does not refer to the termination of every single act; it is reserved for use as a marker to identify only certain types of actions which have been combined in pursuit of a clearly identifiable goal. A continued series of actions (identified by 7 in the fifth digit) which has no clear and identifiable goal but which is suddenly terminated is not so tagged. Nor is continuing behavior which in effect achieves its goal throughout the activity so tagged. Examples will make these distinctions clearer. For instance, suppose that a child is working a puzzle, tries for some time to find and place all pieces correctly, stops briefly to talk to a child sitting next to him, asks for help which he might either receive or not, and then finally puts in the last piece. This final item manipulation would be coded 02747, as had been all the others except the first in the series, which would be 02749. The APPROACH language is not sensitive enough to reflect the difference between that type of coordinated item manipulation with all responses directed toward some specific goal, and an equally long series of item manipulations for which no final goal can be specified--i.e., pushing a truck along a make-believe road. Thus the consummatory response code will be inserted to describe the termination of a series of part-responses all of which have apparently been directed toward a specific goal. The last two digits of the 62 code will indicate how many preceding codes of behavior emitted by the subject of the 62 clause have led up to this particular consummatory response. Thus, if the central figure had emitted 23 pertinent responses since undertaking an item

manipulation with a specifiable goal, the consummatory response will read 06223. This requirement restricts the use of this particular predicate to coding from typescripts.

The second meaning of this predicate is the object of a request--"All right, children, let's finish our painting now." When used to indicate termination, the last two digits will be 00 rather than 99 as might otherwise be the case. This will distinguish this use of the code from the type of termination involving clearly successful consummation. Use of the 00 will simplify computer programming and should be easily distinguished from the fifth digit zero implying ineptitude.

02747	Barbara strings the fourth bead on her string.
02519 05679	She puts it down and walks over to see what other children are doing.

02747-01721 06207	Barbara strings the fourth bead on her string announcing, "I made a necklace."
27401-26109	Mrs. Ryan asks, "Shall I put it on you?"

63 Consummates activity, failure. This code is identical to the one above except that the series of continued actions results in failure rather than success. The same rule mentioned for the last two digits of 62 also applies. It should be noted that the APPROACH language can be used entirely without this code and without 62 except as the object of a request or command. The 63 would obviously never be the object of a request and thus could be dispensed with altogether if one did not need or wish to use the molar category.

02747	Charlie puts another block on his tower.
02740	Charlie places the last block on and the
06316	tower falls over.

64 **Disorganizes.** This is an essentially qualitative category, somewhat subjective, which may involve any or all the other response categories. It describes behaviors that are either of unusual intensity or quality or else that involve carrying out complex combinations of responses which, if differently patterned, would indicate adaptive behavior on the part of the child. The essential quality of the emitted behavior is that it is disruptive or explosive; it often appears as a sudden change in rate or quality of on-going behavior. The predicate involves such things as wild running, riding a tricycle hard against the wall of the house, lying down on the floor and rolling back and forth, taking all the toys out of a box and letting them drop on the floor or throwing them about the room. It sometimes involves escalation of on-going adaptive behavior to a disorganized level. The fourth digit will be used to identify the style of disorganization and is in effect the object of a prepositional phrase--i.e., disorganizes with items of equipment, the environment, the self, etc.

06449	Chris starts to put paste on his hair.
56449 53508	Donald is throwing things around and takes Tommy's (CF) toy away from him.

65 Disintegrates emotionally. This category refers to more than a simple intensification of the previous one. Rather it refers to a wild social or physical breakdown in behavior patterns such as occur in temper tantrums. The act may involve damage to the self (which would be indicated by a second code of assault against the self, 03808) but it does not need to. Such responses are often accompanied by screaming or yelling, in which case they will have a 1 in the fifth digit. However, they might also involve such actions as breath-holding tantrums which occur without sound. A temper tantrum may take many forms and may include many components which could actually be coded (i.e., handling objects, non-locomotory body activities, running, etc.). However, all these components are subsumed under the 65 code. Termination of a tantrum is not identified by a 62 or 63 code. The object of this verb is always 9, even if it involves items of equipment. If another person is hurt during the course of a tantrum (as when a child kicks a teacher who is trying to calm him) this is coded as an assault as a secondary component of the 65 response.

06593	Fred has flung himself down on the floor and is crying and screaming.
20202	Miss Joyce picks him up.
06597 03828	Fred kicks her. He is crying and kicking.

70-79 Control Techniques. This area covers responses that suggest or call forth a specific response from another person and which permit limited options for variety of response. Specific behaviors classified in this overall category may be either positive or facilitative in the sense of suggesting or requesting that certain responses occur; or they may be negative or inhibitory in suggesting or requesting that certain behaviors be terminated. The language permits two levels (with a third level possible by use of the intensity code in the fifth digit) of both facilitative and inhibitory techniques arranged hierarchically in terms of the variability of response open to the responder. A control statement must always be followed immediately by a statement that identifies what was suggested or requested. Thus the five digit code that follows a code with a predicate beginning with the number 7 does not refer to emitted behavior; rather it identifies the type of behavior that has been requested in the preceding statement. The next code then reports what was actually done. Translated into the APPROACH language, this goes as follows: Adult verbally requests of central figure (27101) that central figure sit down (05199); central figure sits down (05199). Thus if the two statements that follow a control statement are identical, the person to whom the request was directed has complied immediately; if they differ, there has been non-compliance, although eventual compliance may occur. It was felt that this technique would be more informative than simply knowing that a request had been issued and whether it had been followed by compliance or non-compliance. With this technique, what is requested is made as clear as the fact that a request has been made, and, in the event of non-compliance, the response emitted in lieu of the requested response is reported. Inherent in the emitted alternative response is information that non-compliance has occurred.

70 Suggests. This predicate describes an implied request given in the form of a declarative or interrogative rather than an imperative. It will often take the form of a statement of behavior that is to be expected as part of a schedule or routine, or behavior that is appropriate within a particular setting, or a description of limits that have been set as a matter of general agreement. It will generally use either the first person plural ("We do things this way") or the third person singular ("Donald needs to wash his hands now"); statements involving the imperative form and the second person ("Donald, I want you to wash your hands now") will be coded as requests rather than suggestions. A common form taken by the structurizing request is the interrogative "Do you think you should begin to put your toys away now?").Also it will be stated in the form of an inquiry about ability ("Can you show me how you put on your coat") or need ("Does Tony need to go to the bathroom?"). The latter type of inquiry needs to be distinguished from an expression of solicitude (41). Taken quite literally these appear to be more a request for information than for action and thus codable as 16. However, when the question appears designed to stimulate action rather than literally to request information, even if delivered in the grammatical form of the latter type, it should be coded as a structurizing request. For example, when a teacher hands a child a cookie and says, "Can you say thank you?" the chances are quite good that she has a pretty good idea that the child can say "thank you" and that she wants him to do so. Thus this type of inquiry is coded as 27001-01224. A 3 in the 5th digit indicates that the verbalization remains suggestive, i.e., "I want more" (70) rather than "Give me" (71), but the tone of voice is now of an imperative or demanding quality, such as screaming or yelling behavior.

Some statements that are verbally identical to indirect control statements are emitted after a certain act has been performed rather than before. They are undoubtedly intended to influence future acts but not the one that has just occurred. Typically these will be coded as 18 rather than 70 ("We sit in our chairs").

27001 02744	"Let's see if you can find the right hole for this peg," says Miss Gregg.
07021 02749	"I want to play in the sand box," says Sally to Mrs. Smith.
27001 01224	"Can you say engineer?" asks Mrs. Tanner.
07021 20159	"Hey teacher, hey teacher," shouts Martin (CF) as Donald takes a cookie from the tray.
27061 65191	Miss Brooks sssh's group.
07029 20202 or 80202	Bobby lifts his hands, reaching to be picked up.

71 Request. This predicate refers to clear requests for action on the part of the person to whom the request was directed, or else to requests for permission for the subject to carry out some type of activity. If it is a request for action, the fourth digit will identify the person to whom the request was directed; if it is a request for permission, the fourth digit will identify the person presumed to have the power to grant permission. If the request is for action on the part of some particular person, then that person will be identified in the fourth digit of the first part of the control statement and will be the subject of the second part. Thus a teacher might says, "David, I want you to pick up your blocks" (27101-06119). If the request is for permission, then both parts of the control statement will have the same subject--i.e., Jane asks the teacher, "May I go outside now," coded as 07121-05614. The expected response to a permission request is either 40 or 30 (permits or withholds sanction). The second half of the control statement does not have to end in 8 (second half of a double code). The 71 request must be verbal. If the request is especially vehement, then a 3 may be used in the fifth digit. No information about verbalization will be lost, as the verb itself must be verbal. This intense request (command) should represent a categorical imperative offering essentially no option for responding in any way other than that called for by the request. The coder must rely on information supplied by the observer for making the distinction between a 71 without a 3 or with a 3 in the fifth digit. These intense requests generally involve demands for immediate response and may connote utter exasperation; they also often represent escalation from a milder request made one or more times previously. Statements that begin "Will you..." or "Will you please..." will be 71 with no intensity indication (unless the observer reports that the statement was emitted in a voice of exasperation).

71 Request (cont'd).

87101-06119	"David, pick up your blocks, please," says father.
07151-52509	Peter (CF) says, "Give me one," to Andy.
27101-00139	Mrs. Kranz says, "Look at what Patty did," to Lisa (CF).

72 Inhibits. Inhibitory suggestions or requests call for the cessation of some type of activity represented in the various types of emitted behaviors. Tye type of behavior inhibited and the person carrying it out will generally have been referred to in the record in the immediately preceding behavior code. Treatment of these inhibitory requests is identical to the procedure followed with the facilitative requests--i.e., the first statement announces that an inhibitory request has been emitted and to whom, and the next identifies the type of behavior which the speaker wishes to have inhibited. Interpretation of the chain of information will follow the same logic as that involved in interpreting a positive suggestion or request, except that in the inhibitory command the occurrence of two identical codes reveals that non-compliance rather than compliance has occurred. Inhibitory statements are also broken down into two levels--suggestions and requests. The former is very mild and describes an implied request for cessation of a certain type of activity. It will usually be given in the form of a declarative rather than an imperative sentence and will often appear as a statement of behavior that simply "isn't done" within a particular setting or by a particular type of child. In this context, however, it must appear as a control statement; if it occurs in response to already emitted behavior, then it will be coded as 18 (informs about the culture).

06149	Mark is splashing around in a mud puddle.
23509-27201 06499	Miss Kramer turns the water off and says, "We are not going to play there anymore!"
07221-05619	"I don't want to go outside" says Jane to the teacher

73 Forbids. This predicate refers to a request that a certain pattern of on-going behavior be terminated. If the request is especially vehement, this will be indicated by a 3 in the fifth digit. As with the positive requests, the necessary information for making the decision about vehemence must often be supplied by the observer, as the words alone will not always convey the tone of the message. Decision about whether a suggestion or request is to be coded as positive or inhibitory will largely depend upon the language used, with some type of negative expression generally found in the inhibitory variety (stop, quit, don't, etc.). There are some types of suggestions or requests that can be handled equally well by their designation as either facilitative or inhibitory. For example, one could interpret "Don't wiggle, Johnny," as a positive request for a decrease in body activity (27101-05199) or as an inhibitory request pertaining to non-locomotory body activity (27201-05399). Within the APPROACH grammar the latter alternative would be preferred, as the language of the command involved negative action. If the request had been worded, "Sit still, Johnny," the code would have been 27101-05199. A fine distinction, perhaps, but in teacher training and parent education literature a strong case is made for the superiority of the latter type of request over the former. Not all requests for action, however, can be equally well accommodated by either a facilitative or inhibitory request without proliferating other predicates within the language. For example, there is no predicate that refers to "non-manipulation of objects"; yet in a world of young children many commands involve cessation of object manipulation. The inhibitory request handles this contingency very nicely.

27301-00329	"You may not stay in here along," says Miss Smith to Paula.
24101-27301-06100	"Careful, don't get soap in your eye," says mother.
07321-00329	"Don't make me go home," says Michael to his teacher.

74 Offers. This is perhaps the mildest and most considerate of the various control techniques. It is most similar in tone to a request for permission, saying in effect "If you indicate a desire to do something or other, I will grant your request." Qualitatively it is very similar to solicitude but is differentiated by a clear offer on the part of the subject to carry out some specific activity (whereas in solicitude the subject may simply be groping for a way to account for the object's behavior but may make no clear offer to do something special). It is always couched in considerate tones and will typically be prefaced with the words "Would you like me...(to do something for you)?" Coding is handled in the same manner as the other control statements, with the opening statement announcing that an offer has been made, with the second identifying the offer and with the third reporting whether sanction from the object has been given or denied.

27401 20203	"Sarah, do you want to sit on my lap?" asks Aunt Jane.
27401-24509	"May I help you," asks Mrs. Gaines
27401 65619	"Larry I'm going to the store. Do you want to go too?" asks Mrs. Sterling.

Behavior Settings

The principal advantages of such a microscopic behavioral analysis relate to attempts to study psychological ecology. Thus in order for the technique to permit relationships between setting and behavior to appear, a good deal of attention must be given to describing the situations in which the behavior occurs. In the present system, the setting analysis is considerably more gross than the behavioral analysis. However, in translating life settings into a numerical representation, care has been taken to permit changing the observational lens to a higher level of magnification if this should be desired. Thus, in the numbers assigned to the various activities that can occur throughout the day, only a few possibilities have been exhausted. For example, if during a "free or unstructured activity" (03 in 2nd and 3rd digits) one wishes to observe how much time is devoted to doll play, sand play, water play, or any other particular type of activity, any one of these for a particular record can be assigned a specific setting score. Similarly, if one is interested in how much time a particular child spent near a particular teacher, then for a partciular record made in the school one can assign the numeral "1" in the 5th digit of the setting code to that teacher. Then each time the child began a sequence of behavior in which that particular teacher was present a new setting code would be entered on the record; when that teacher disappeared the setting code would change. The act of establishing or terminating contact would be picked up by the emitted behavior code. However, that is not sensitive enough to indicate whether a particular person is simply "standing near-by" throughout a series of behaviors emitted by the central figure. Thus it is hoped that the setting codes can be manipulated to give a record a fuller meaning.

Setting Alert (first digit)

The number 9 in the first digit of any statement indicates that a setting code rather than an emitted behavior code follows. The next two digits refer to the specific activity setting in which the emitted behavior occurs. The fourth digit refers to the locale of school, home, or other (such as in a vehicle, etc.). The fifth digit describes the people in the immediate environment in which the centrum is functioning.

It is the responsibility of the observer to announce the onset of a new setting code; without this information coders will have difficulty in marking the exact spot in a record at which the centrum moved into a new setting. For example, a teacher might announce to the class that it is now story time, thus presumably calling for a setting code of 90517. However, several other emitted behaviors might occur before the story actually commences and thus identify this period as a transition time (09) rather than as actually representing story time. Thus it is expected that the observer will simply announce, "Setting code: story," when that segment of activity officially begins.

Activity Identification (second and third digits)

This refers to the general type of activity taking place in the total environment and not merely in the vicinity of the central figure of the observation. They have been settled upon in terms of the range of activities carried out in the Children's Center. In most nursery school settings, not all children in a particular classroom will be doing the same thing at the same time, but there is a general consensus as to what is to occur at that time. Therefore, the activity identification should designate the officially recognized range of activities. Thus if during free play an adult reads a book to a child or takes a child to the bathroom, this does not change the setting code. The same rule applies to behavior samples made in the home.

00 *Lunch or snack*. Lunch or snack is being served, or an announcement has been made that it is time for lunch or snack with the apparent expectation that the group will sit down immediately and eat. If the food is served in the classroom, then the new setting code is introduced once the announcement has been made. If the meal is to be served in a different room, then the new setting code is recorded once the central figure is in the geographic area where the food is to be served.

01 *Nap or pre-nap time*. The children are being put into their cribs or asked to get on their cots or pads for nap. In the Children's Center setting, this means from the moment they enter the room in which they are expected to sleep, since cleanup and toileting activities generally are carried out in another room.

02 *Diapering or toileting or associated dressing or undressing*. The children in the group are either being changed or being placed on the toilet or potty chair for elimination, or else are being undressed in preparation for such an activity, being cleaned up after eliminating or being dressed at the conclusion of the activity. (Note: just as there is no specific verb for dressing apart from general care-taking, so is there no specific setting for dressing or undressing. This activity is always part of the preparation for other activities such as toileting, eating, napping, going outside, etc. and is therefore subsumed under these broader activity identifications.) Again, there might be a considerable amount of free time for the central figure during the toileting period in that the adults cannot attend to every child simultaneously. However, the setting code would remain 02 rather than 03.

03 Free or unstructured activity. This is the hallmark of the typical nursery school program and refers to the time when children are free to select from all available materials and activities that which they want to do. Suggestions made and materials offered, but freedom of choice is still with the child.

04 Structured learning time. This is an activity identification which formerly would not have occurred in many schools but which is a regular feature of all groups of the Children's Center. It refers to any type of structured activity, teacher originated, which is introduced to encourage cognitive advance. Books and art activities are excluded, unless the latter refer to some type of structured activity which simply happens to involve media traditionally regarded as art media (e.g., copying a design, making a design out of pre-cut shapes, matching colors or shapes, etc.). Typical activities covered under this rubric are lotto games, specific requests to identify pcitures or objects, cooperative puzzles, Simon says games, morning gatherings and involving such things as roll call and discussion of the weather, puppet shows, science exhibits and experiments, etc.

05 Book or story. This refers to a formal book-reading or story-telling time. In the school setting it is likely that the children will be encouraged to gather together and sit either on the floor or on a chair. In the home setting it would be more difficult to designate a formal "book time"; therefore, any time that a book is read this would be considered as story time.

06 Records, singing, instrumental music, or rhythm activities. Again this relates to commonly designated music periods. An announcement by the teacher to the effect that "It's time for our record now" will herald the beginning of such a period.

07

07 Art, cutting and pasting. Activities to be listed under this code relate to free artistic expression, not to structured learning activities that just happen to utilize artistic media. This does not mean that during an art activity a teacher cannot make a suggestion or urge a child to participate. Rather it is meant simply to distinguish the relatively free expression period from more task-oriented art periods. Thus easel painting or finger painting would be 07; painting a box to be used as a play house would be 04. Similarly, making a collage would be 07; pasting small items on to a background to approximate some instruction or pattern would be 04.

08 Gym or outdoor play. This refers to the time when the children are playing either in the gymnasium or outdoors, with the activities largely child-initiated.

09 Transition. This refers to the time between clearly identifiable periods of activity. These periods will generally last from about one minute to no more than five minutes. They are usually heralded by an announcement such as "It's time to clean up now," or "We'll go outside in a few minutes and need to put our toys away."

10 Medical or psychological experience. The child has left the classroom for a medical examination or treatment or for some type of psychological assessment. The latter includes special experimental procedures (such as the T-maze) as well as developmental and achievement tests. It does not cover special learning enrichment (such as with the Soundmaster), which is coded as a structured learning experience.

11 Assembly or program. This refers to a formal gathering of the children for either a musical performance, a movie, slides, puppet show, discussion, etc.

12 Adult-child interaction, free. This code is one that is quite provincial, referring as it does to the first ten minutes of one of the assessment procedures of the Syracuse Early Learning Project.

13 Adult-child interaction, structured. This is code is similarly restrictive and refers to the second ten minutes of one of the assessment procedures, during which time the mother is asked to fill out a data form about the child. Both 12 and 13 can easily be reassigned by other investigators.

14 Perceptual-motor exercises. This refers to participation in certain special physical education activities being planned and developed in the Children's Center. As a rule they will be carried out either in the gymnasium or outdoors, but the 14 code should be used rather than 08 when these special exercises are being conducted.

15 Field trip. The children and adults are on a field trip. This includes formal trips to community centers such as the fire station and also less formal excursions out of the boundaries of the Center such as walks and trips to the park.

20 Other. Any other activity than those described and defined above.

Geographic Region (fourth digit)

This number identifies the region in which the behavior is emitted. The codes used are very simple and need no formal definition other than that connoted by the labels.

1 School.

2 Home.

3 Laboratory or examining room.

4 Special teaching area (e.g., science corner, principal's office, etc.).

5 Other.

Supporting Cast (fifth digit)

Information in this digit reveals the nature of the social setting which characterize the activities during which specific behaviors are emitted. Again they need no formal definitions other than a listing.

0 Child alone.

1 Mother present.

2 Father present.

3 Mother and father present.

4 One other child present.

5 More than one other child present.

6 Non-family adult.

7 Non-family adult or adults and child or children.

8 One or both parents plus other adult, with or without other children.

9 Other.

Miscellaneous Rules

Double codes. Double codes (denoted by an 8 in the 5th digit of the second code) are to be used sparingly; the best rule is "When in doubt, use two separate statements." Any response that is double coded must have the same subject but may have a different object. Thus, for example, when a locomoting child falls (05690) and cuts his lip (receives assault from the environment, 13803), this is not double coded; each component is simply listed as a separate statement. The double code is reserved for describing qualitative differences in response patterns which otherwise would be lost. Thus physical restraint of a child accompanied by a smile (23502-24208) is quite different from physical restraint accompanied by a frown (23502-23208) and should be distinguishable in the record. Though double codes must always have the same subject, they need not always take the same object. Thus a teacher's interference with one child might involve protection of another (23502-248 3/5 8), a pattern which might be responded to by the child in an entirely different manner from an act of interference which in no way involves another child.

Response variants not possible within the basic system. It is hoped that other users of the APPROACH language will feel free to "elaborate" this somewhat "restricted" linguistic code (see Bernstein, 1960). This can always be done by adding other verbs, and there are still some 30 numbers unused within the 5-digit coding system. Another technique is to permit the meaning of the fourth and fifth digits to vary as a function of the verb. Certain of the qualifiers are incompatible with some verbs, while others are necessary accompaniments of certain verbs and are thus redundant. The best example of the first is that the numbers 4 and 5 in the fifth digit as now defined must not be used except as part of a request or made in response to one; therefore, these numbers could easily be assigned to connote certain specific variants of different verbs. Similarly, there are many predicates that must be emitted verbally (inquires, informs, etc.) and thus do not need the 1 in the fifth digit to report that the response was accompanied by a verbalization. Thus for these particular verbs, the 1 could be assigned a different or perhaps more refined meaning (e.g., emitted with poor grammatical structure). As another example, under the locomotion category (56) the definition precludes any identification of vehicular locomotion, a code which might be entirely meaningful if an adult rather than a child were the central figure of the observation. Here, a response coded as 25614 could easily be assigned the meaning "adult locomotes toward the environment in a car." The use of such variants will, of course, depend on the extent to which such refined distinctions will help answer the questions posed by any particular investigator.

For certain kinds of analyses it may be necessary to identify every person within a group for both subject and object rather than assuming the equivalency of male adults, female adults, male children or female children. For such studies (depending of course, on the size of the group) there appears to be no substitute for an assignment of a number to each person in the group, adding these to the possibilities for subject and object of the behavioral clauses, and connecting each code to a 7-digit rather than a 5-digit statement.

Order of coding. There is no doubt but that the words used by the observer will have some direct effect on the record and thus on the data. Thus one observer might report "Tony looks over at Donald, takes a bite of his cracker" (00159, 02009); another observer reporting the same behavior might say "Tony takes a bite of his cracker and looks over at Donald" (02009, 00159). Unless one had records made by two observers, one would know nothing of the possible contradiction. Obviously then a rule which fosters coder reliability is simply to code the predicates as the observer uses them. Occasionally, however, in the rush to get all the behavior committed to the tape the observer will not be able to unscramble into its proper sequence such a description as "Tony looks up at Miss Smith who has just come into the room." In order for this to be accurate the coder must be alert to put the events into proper sequence (25669, 00129). Verbs which are purely descriptive (largely present participles) and which refer to previously executed acts should not be coded. E.g., "Kneeling on the floor, Ron plays with the trucks" (02749).

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Table 1. Summary of the major APPROACH Behavior Categories and the numbers assigned each in the code.

BEHAVIORS

I. Subject of Behavioral Clause (1st digit)

0 Central Figure (CF)
1 The environment
2 Female adult
3 Female child
4 Item
5 Male child
6 Group, including CF
7 Group, excluding CF
8 Male adult
9 Setting alert

II. Behavioral Predicates (2nd and 3rd digits)

Environmental Contact (00-09)

00 Ignores
01 Attends
02 Establishes or maintains contact
03 Terminates contact
04 Scans

Information Processing (10-19)

10 Confirms
11 Shows (to) or demonstrates (for)
12 Communicates or converses
13 Writes or draws (for)
14 Reads (to)
15 Corrects or disconfirms
16 Inquires
17 Informs or teaches
18 Informs about culture
19 Dramatizes (for)

Food Behavior (20-24)

20 Gives food (to)

Food Behavior (cont'd)

21 Takes or handles food
22 Takes or manipulates food
23 Transports food (to)
24 Disorganizes with food

Manual Activities (25-29)

25 Transfers item(to or toward)
26 Takes(from)or handles item
27 Manipulates item
28 Transports item (to)
29 Throws or rolls item (to)

Negative Reinforcement (30-39)

30 Withholds sanction (from)
31 Shows discomfort
32 Expresses displeasure (to)
33 Criticizes or derogates
34 Expresses hostility
35 Interferes or restricts
36 Resists or rejects
37 Threatens or frightens
38 Assaults

Positive Reinforcement (40-49)

40 Permits or sanctions
41 Expresses solicitude
42 Shows pleasure
43 Approves, encourages
44 Expresses affection
45 Facilitates
46 Excuses
47 Bargains, promises
48 Protects, defends

Body Activities (50-59)

50 Increases or accelerates
51 Decreases or retards activity
52 Perioralizes
53 Acts in situ
54 Adjusts or accommodates

Body Activities (cont'd)

55 Provides kinesthetic stimulation
56 Locomotes (toward)
57 LMA's
58 Marches, dances or rhythmicizes
59 Voids or excretes

Miscellaneous (60-69)

60 Acts or occurs
61 Caretakes
62 Consummates activity
63 Consummates activity, failure
64 Disorganizes
65 Disintegrates emotionally
66 Makes music (with)

Control Techniques (70-79)

70 Suggests
71 Request
72 Inhibits
73 Forbids
74 Offers

III. Object of Behavioral Clause (4th digit)

0-8 Same as for 1st digit
9 No information

IV. Supplementary Information (5th digit)

0 Ineptly
1 Accompanied by verbalization(or with sound if subject is 1 or 4)

Supplementary Information (cont'd)

2 Involving interpersonal physical contact
3 With intensity
4 In a specified manner, place or time
5 In a manner, place or time other than that specified
6 Imitatively
7 In continuation
8 Complexly
9 No information

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Table 2. Summary of the major Setting Categories and the numbers assigned each in the code.

SETTINGS

I. Setting alert (1st digit)

9	Setting code

II. Activity Identification (2nd and 3rd digits)

00	Lunch or snack
01	Pre-nap or nap
02	Diapering or toileting or associated dressing or undressing
03	Free or unstructured activity
04	Structured learning time
05	Book or story
06	Record, music
07	Art, cutting, pasting
08	Gym or outdoor play
09	Transition times
10	Medical or psychological exam(or treatment)
11	Assembly or program
12	ACI, free
13	ACI, structured
14	Perpetual motor exercises
15	Field trip
20	Other

III. Geographic Region (4th digit)

1	School
2	Home
3	Laboratory
4	Special teaching area
5	Other

IV. Supporting Cast (5th digit)

0	Child alone
1	Mother present
2	Father present
3	Mother and father present
4	One other child present
5	More than one othe child present
6	Non-family adult
7	Non-family adult or adults and child or children
8	One or both parents plus other adult, with or without other children
9	Other